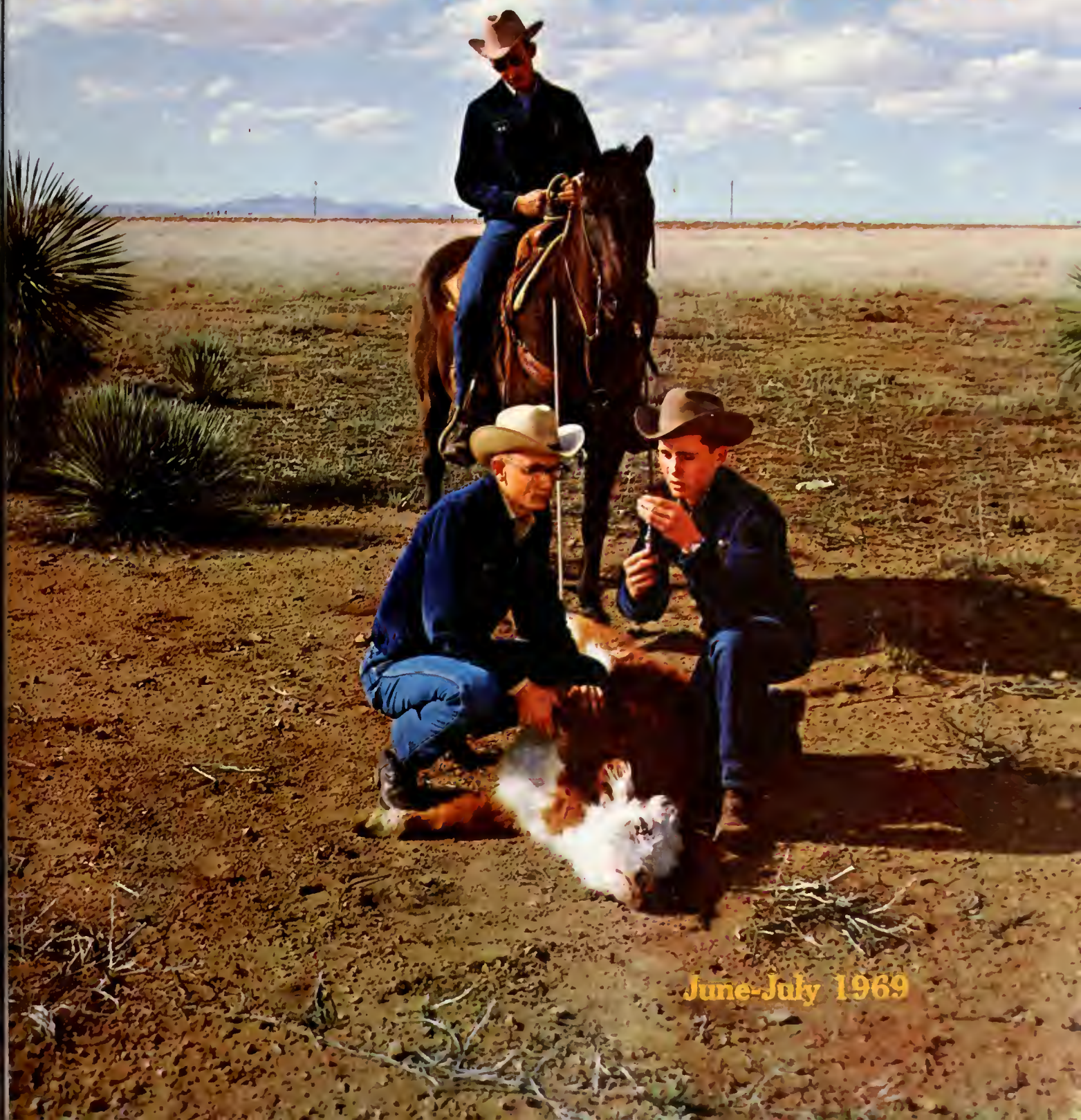


The National

Future Farmer

Owned and Published by the Future Farmers of America



June-July 1969

EQUAL RIGHTS FOR LEFT-HANDED SHOOTERS

Remington now offers southpaw bolt-action rifles in 22, 6mm and 308 calibers.



We have a special respect for you southpaws.

You manage to live in a right-handed world and very often beat the right-handers at their own game.

But working a right-hand bolt-action rifle sometimes seems just too much. If you also happen to have a left "master" eye, you've got the sad choice of mounting the rifle on your right shoulder and having sighting and aiming problems. Or putting it to your left shoulder and going through some special gyrations to work the bolt. Or just giving up the power and strength of bolt actions.

Unless, of course, you get one of our new Remington "lefty" rifles.

We're now making a left-handed bolt-action 22—the Model 581 clip repeater shown here. (We also make a right-handed version of the Model 581, plus right-handed versions only in the Model 580 single-shot and Model 582 tubular repeater.)

A better 22 you can't buy—in a right- or left-handed model. The 581 is the rifle with six locking lugs! With fantastic strength and solid lock-up for accuracy that puts many an expensive target rifle to shame. It has the fastest lock time of any rifle you can buy. Your bullet leaves the muzzle before the firing pin of most other

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We did a little bolt reversing on our Remington Model 788 bolt-action rifle in two calibers... 6mm and 308. The 6mm is the perfect long-range varmint cartridge and not at all bad on deer. With the right bullet weight, of course. And the 308 will bring down almost anything you'll find on four feet in North America.

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Also automatic and pump actions

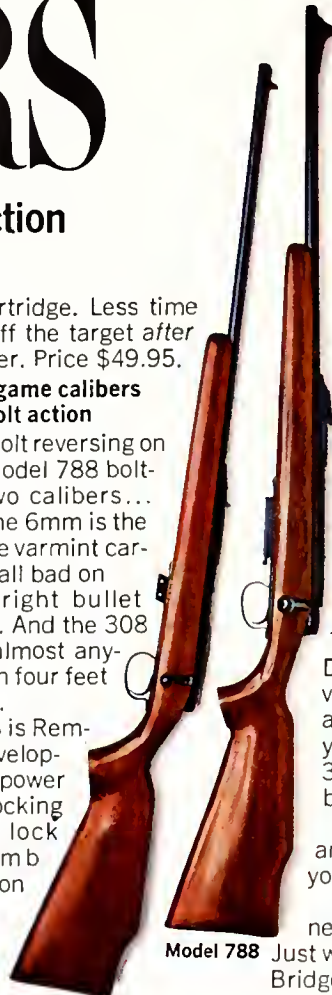
For lefties who want an automatic rifle, with safety and cheekpiece reversed, Remington makes the strongest automatic big-game rifle you can

buy. Our Model 742 BDL Deluxe has three rings of steel around the cartridge head. The receiver is milled from solid ordnance steel. And that automatic action is as dependable as tomorrow's sunrise. Two calibers: 30/06 and 308 Win. Price: just \$179.95. If you want a pump with safety and cheekpiece reversed for left-handed shooters, pack the fastest hand-operated big-game rifle made on your next hunting trip. The Remington Model 760 BDL Deluxe. Double action bars to prevent twisting or binding. Remington accuracy and a crisp trigger to help you put that buck in the freezer. 30/06, 308 Win. or 270 Win. calibers. Priced at \$159.95.

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Model 788

Model 581



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Firestone

The National Future Farmer



VOLUME 17

NUMBER 5

JUNE-JULY, 1969

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Features

Five Sons, Five Farmers 16

Here's proof that a farm family can stay together and build a farm business. Five brothers of the Leonard Fuller family in South Dakota farm together. Their Dad and Mom are still on the farm, too, but Dad says all he gets to do is run after parts. Of course, this is no poorly organized operation—or it wouldn't still be in business. In simple terms, this family works together, but farms independently.



A Farming Foursome 22

The foursome of National FFA Vice Presidents works as an effective leadership team; and they each have a significant stake in farming operations. These operations are quite varied as you would imagine because of their geographical locations. These FFA officers also have outstanding personalities which make them capable for their tasks. You'll appreciate this chance to know them better.



Breeding Disease Resistant Livestock 34

In every flock or herd "hit" with disease, one can find some animals that are affected very little or not at all. If animals can resist diseases, why not multiply their kind and make the whole flock or herd resistant. This feature presents some of the up-to-date factors and considerations which have already come to light regarding this hypothesis.



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Our Cover

On a ranch in the West, there is still plenty of work to do. They still ride horses and work with cattle. These modern day cowboys are members of the Douglas, Arizona, FFA Chapter. Atop the horse is Don Kimble. Robbie Sproul is preparing to vaccinate the calf, while holding the calf is Bill Martin. All this effort is just part of the typical routine during roundup time—branding, vaccinating, and castrating. It is plenty evident that these FFA members are learning by actually doing the job.

Photo by Guy Price

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The National FUTURE FARMER

A Word with the Editor

MANPOWER needs for agriculture continues to be a subject of discussion and concern for many groups. For the most part, the emphasis centers around the need to keep more young people in agriculture. Not just in production farming alone, but in the entire agriculture complex—the food and fiber industry.

The topic was thoroughly discussed at the recent National Agribusiness Symposium which I attended at the University of Nebraska. Those in attendance included representatives from both agricultural colleges and agricultural business. The Symposium covered a wide range of topics with special emphasis on training at the college level, but several points brought out at the meeting will be of special interest to you.

A farm background is an asset and may give you a decided edge in some jobs. This is particularly true if you are in a position where you will be working with farmers because you can speak their language.

The odds favor the agricultural college graduate over other graduates, but this point is not entirely proven. There are a variety of jobs in the agricultural industry that can be satisfactorily filled by those who are not graduates of agricultural colleges. While the area of specialization is important in many jobs, the agricultural industry is looking for people willing to work and willing to learn.

We are finding an increased number of students in agricultural colleges that do not have a farm background. It was reported that more than half of the students in agricultural colleges today do not have a farm background, though many do come from rural areas. Therefore, you should not overlook a career in agriculture just because you did not grow up on a farm.

What is the key to success? One speaker pointed out that there are not readily identified educational qualifications that will determine a student's success in business. A show of hands by the industry representatives present indicated they come from a variety of educational specializations. Frequently a person spends his working life far removed from his area of special study. In the final analysis, it is a person's individual qualifications that determine his success.

Not all jobs in agriculture are limited to the four-college graduate. There are many jobs at the technician level with an increased number of vocational technical schools and community colleges offering courses which prepare the student for these jobs in agriculture.

Vocational agriculture and the FFA can be your launching pad to an off-farm agricultural career if you do not remain on the farm. You have other advantages, too. As a speaker put it, "Farm youth learn to organize their thoughts into productive efforts." This is something the agricultural industry can use.

Star Farmer at NAAMA Meeting

Star Farmer of America, Joe Spencer of Albert, Oklahoma, appeared on the program at the 10th Anniversary Farmmarketing Seminar sponsored by the National Agricultural Advertising and Marketing Association. Joe was a member of a three-farmer panel that appeared on a program entitled, "In Touch With the Farmer." Over 800 advertising, marketing, and sales executives were present at the Chicago meeting to hear FFA's top farmer tell about his farming program and future plans.

Wilson Carnes
Editor

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Looking Ahead

Livestock

OPTIMUM FEEDLOT TIME—Feedlot operators may soon be able to scientifically determine the optimum time to feed a steer, say animal scientists William Stringer and Richard Epley of the University of Missouri. Their studies show that the choice of sire and length of feeding time work together to affect the steer's body composition. Thus, from a bull's progeny records it should be possible to determine the optimum time to feed his offspring and to select steers for a specific feeding period.

CALF SCOURS VACCINE—Soon cows will be vaccinated with a vaccine which veterinarians hope will stop calf-killing scours. According to veterinary researchers Charles Mebus, Marvin Twiehaus, and Norman Underdahl at the University of Nebraska, the vaccine should pass the immunity to calves through the colostrum in the cow's milk. The researchers recently isolated the calf-killing virus and presently are testing three vaccines which they hope to make available on an experimental basis this fall.

CATTLE EMPHYSEMA—A nutritional cause of pulmonary emphysema in cattle has been discovered by a team of scientists, J. R. Carlson; I. A. Dyer, and R. J. Johnson at Washington State University. By administering oral doses of tryptophan, and amino acid necessary to animal health, these three scientists reproduced the lung disease. It is hoped that further research will reveal specific agents causing the disease.

Crops

LIGHT UPSETS INSECTS—Light regulated to produce "extra" sunrises and sunsets upsets insects' rhythmic daily activities, thus slowing their rate of growth. Moreover, Agricultural Research Service scientists, N. N. Sullivan and D. K. Hayes, at Beltsville, Maryland, say that the insects' reproduction cycle and other behavioral traits may be affected in ways to make them easier to control with existing methods—and with possibly less insecticide. Tobacco budworm larvae subjected to light after the regular sunset and before the regular dawn, weighed about one-third less than untreated larvae over a six month period.

ANTIBIOTICS CURE PLANT DISEASES—Scientists in Japan and the United States have demonstrated that some antibiotics, used to cure human diseases, can be used to prevent or cure a plant disease. According to Merritt Nelson, plant virologist at the University of Arizona, a typical pneumonia and a plant disease called asters yellows are caused by the same microbe, mycoplasma. Even though these microbes have been resistant to penicillin, they are found sensitive to tetracycline types of antibiotics. Thus

far, five other plant diseases have been found to be caused by similar mycoplasmas.

FOAMICIDE SPRAYING—Foam spraying, an entirely new concept in applying pesticides and herbicides to both land and livestock, has been developed that produces kill at less cost. This application, which looks like and sticks like shaving lather, can be placed exactly where it is needed without drift. According to the manufacturer, Range Engineering Development Corporation of San Angelo, Texas, Foamwet, the foaming agent, is added to the tank along with the water and chemicals and is applied with a Foamicide applicator.

Land

LONG-TIME FERTILIZATION—A fertilizer suspended in or coated with wax and other additives could eventually feed plant growth for several years. At a subsidiary of Gulf Oil Corporation, encapsulated materials that do not wash away easily, but release plant foods slowly, without over-fertilization or burning the plants, are now being tested. The encapsulation process could be valuable in sandy soils where fertilizers tend to leach away and in other soils where runoff is great. In addition, this method would be more efficient and economical than ordinary methods.

Management

OPERATION PLANNING—A complete computer farm record program will soon be offered by Pioneer Data Systems, Inc. The record-keeping system will not only "keep books", but will allow for farm operational planning comparable to other businesses. The program will permit the farmers to predict the effects of shifting income from one crop to another, increasing or reducing various enterprises, or of hiring more or less labor. Thus, according to the company, the program should appeal to the diversified large farmer.

Buildings

CHROMATE FINISH—The University of Wisconsin used a weed sprayer and a chromate finish—made of water and a few non-corrosive chemicals—to "paint" an entire barn in 2½ hours at a cost of just over \$25.00. The easily maintained wood finish developed by U. S. Forest Products Laboratory will last five or six years and prevent problems of paint blistering and peeling caused by moisture. A copper compound in the finish also protects against rot. The only drawback is the color—grey-green.

All-American Al Worley and Rhodes Scholar Dick Holmquist see things the same way.



When it comes to Army ROTC, Al Worley and Dick Holmquist, of the University of Washington, Seattle, find themselves on the same team. Both are making the most of ROTC.

Al was a defensive back on just about everyone's 1968 All-American team, Husky co-captain and NCAA record holder for pass interceptions in one year.

Dick Holmquist is just as well known in his field. Phi Beta Kappa and a Rhodes Scholar, he has won just about every award the University has to offer. He has already received his commission as a Distinguished Military Graduate. Active service has been delayed until he completes his studies for a doctorate degree in law and takes his bar examination.

How did these two busy campus leaders find time for ROTC? Worley says, "Any student who wants to take advantage of what ROTC has to offer—the choice of two careers—can find time for it. In my case, the self-discipline that comes with ROTC actually helped me organize my time a little better."

Holmquist agrees. He says, "ROTC can be a springboard to almost anything a man wants to do. For example, I'll be practicing my profession, gaining valuable experience, while I'm in the Army. In my book, ROTC is time well spent."

What can Army ROTC do to help you in college? Take it from Al Worley and Dick Holmquist. You'll be better prepared for success, either in the Army or in civilian career.

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A Farming Agribusinessman

While remaining on the farm this young man worked his way into a promising agribusiness career.

By Ron Miller

LIKE many young men training in vocational agriculture, Roger Phelps of the Marysville, Ohio, FFA Chapter embarked on a career in agribusiness.

While on a field trip, Roger learned of many career training opportunities available in his local community. By working in one of these agribusiness programs, he started on what seemed to be an interesting way of earning money. A nursery opportunity developed into an exciting career which Roger continues to pursue and enjoy.

As a youngster Roger got acquainted with agriculture on a 120-acre farm which his father rented. Since Mr. Ivan L. Phelps also worked in a factory, Roger assumed the responsibility of the morning and evening chores. In addition, he helped work the farm's 85 acres of crop land and earned extra money during the summer by helping the neighbors with hay baling and harvesting.

In 1960, the Phelps family bought their present 82-acre farm near Marysville. At this time Roger's mother also went to work in a factory, and Roger took on the job of operating the family farm. Mr. Phelps gave Roger a cow, three acres of virgin land, and the use of the farm machinery in exchange for Roger's labor.

By 1964, when the young man started his supervised farming program under the guidance of FFA advisor Odell Miller, Roger had already cleared the land. For the first three years in FFA he raised soybeans, wheat, and hogs, and used lime, fertilizer, and other soil improvement practices.

With Roger contributing his part, the Phelps family also found time to remodel their home, doing most of the work themselves. It took many hours, but they re-sided the house and built a new two-car garage. To complete the new look, they replaced all the downstairs windows and doors, repainted the trim, remodeled the kitchen, and added some new appliances for Mrs. Phelps.

Then, in 1966, Roger became interested in the agribusiness program at O. M. Scott & Sons, a lawn products company. He started as a part-time

trainee and continued to work his way up to his present position of Junior Laboratory Technician.

Along the way, this agribusinessman learned many technical skills which he continues to broaden. He knows how to operate micro-balances, microscopes, calculators, seed threshers, sterilizing equipment, tri-plex mowers, sod cutters, and other conventional lawn and nursery equipment. Moreover, he has been responsible for the preparation and installation of random experimental plot design and the maintenance of grass breeding nurseries. These duties also included the application of herbicides, harvesting and threshing, and recording the location of the seed stock.

Roger has made chromosome determinations and identified insects, seeds and plants with microscopes. Using an infrared moisture balance, he has analyzed seed moisture content. In addition, this technician has propagated vegetative plants, conducted germination studies, took plant clipping weights, made yield tests, and summarized various plant data.

Roger also assisted with a special seed irradiation study conducted in cooperation with Ohio State University. Other projects on which he worked included soil erosion control, turfgrass field evaluations, and the crossing and hybridation of grass varieties.

While training in the agribusiness field, Roger has had many opportunities to work with people. He has conducted tours for research guests, vo-ag classes, county groups, and university personnel. The young agribusinessman also attended research and development meetings, participated in biochemical seminars, and prepared sod displays for national meetings. For his idea of adding a safety shield on a miniature threshing machine, Roger received a company safety award.

Because Roger has done such a good job for his company, they have made it possible for him to attend their technical institute. According to Roger, "My future plans are to continue to specialize in turfgrass management and development programs in biochemical research. To improve my knowledge as a Junior Laboratory Technician, and

Using this balance Roger weighs, in milligrams, small amounts of chemicals for seed treatment and individual seeds.

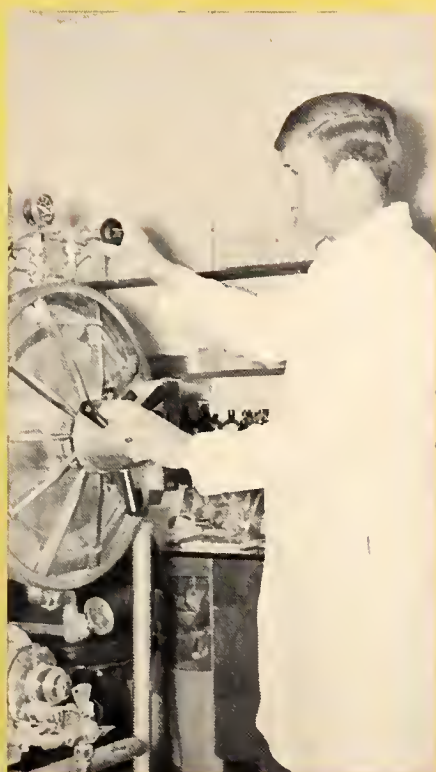
As part of the maintenance for a grass breeding nursery plot, Roger applies herbicides with a conventional sprayer.

At the near right, Roger separates the chaff, inert material, and light seed from the heavy seed with a seed blower.

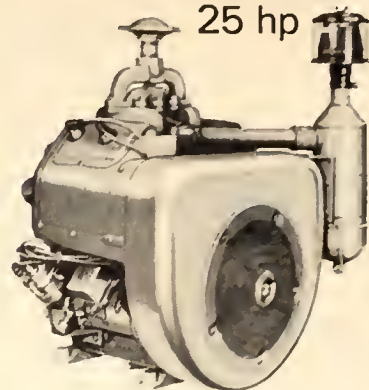
After using laboratory glassware and hand tools the technician sterilizes the equipment with a steam autoclave.

further my education, I have enrolled in night classes at the Ohio State University."

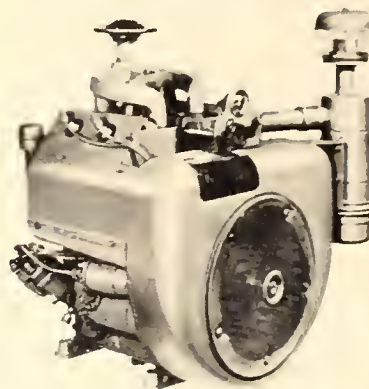
Besides holding a technical position and operating the farm with his parents, Roger found time for many chapter and community activities. While in high school he served as chapter president, chapter sentinel, and as chairman of the parliamentary procedure team, banquet greeting and program committees, and the leadership committee. Roger was a member of the varsity wrestling team, junior class play, and held several offices in 4-H. He also played the electric guitar in a five-piece band which performed throughout the state. He won the Chapter Star Farmer award in 1967, and the 1968 National Agri-business Proficiency award.



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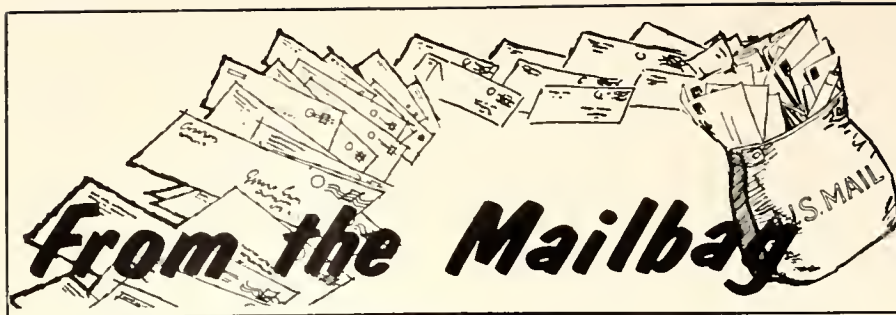
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San Francisco, California

It was very kind of you to send us the April-May issue of *The National FUTURE FARMER*. We appreciate the coverage that you allocated to the FFA officers tour of San Francisco banks which appeared on page forty-six.

Paul K. Strobel
Director of Public Relations
California Bankers Association

Fayetteville, Georgia

The chapter in Fayetteville held their annual Parent-Son Banquet on February 21, 1969. Our guest speaker was Robert Rish, the 1967-68 National Vice President. It is because of Robert's recommendation that I am consulting you.

Our chapter has been trying to obtain a copy of the convention proceedings from the 1968 National FFA Convention. If you could help us acquire a copy, I would surely appreciate it.

I have a few facts about our chapter Robert said you would be interested in. First, as of February 10, our chapter had a total income of \$4,031.68. All of this was derived from the chapter's projects.

Also, the chapter initiated a new award, the Outstanding FFA Member. The award went to the member with the most outstanding supervised practice program, scholastic average, and interest shown in our organization.

One important fact about this award is that it can not go to an officer. This creates more interest by the members, as you can see by our total income. I think this award would be an idea for every FFA chapter to think about.

John Smith, President

Interesting fact, your chapter's total income of \$4,031.68. How did you go about gathering up all these funds for the treasury? We would like to know about other chapters' fund raising activities.—Ed.

Cummings, Georgia

I enjoy our magazine very much. I'm a second year FFA member in the Forsyth County Chapter. My advisors are Mr. James G. Harris Jr. and Mr. James A. Fowler. We have about 120 members in our chapter. We have a Hampshire, Yorkshire, and Duroc pig chain. Each breed has five gilts and a boar. We have a dairy calf chain. We have about two heifers each of the Jersey and Guernsey breeds. We presently have three Black Angus heifers in our beef calf chain, but plan to add two more.

The magazine is the greatest. I especially enjoy your articles on "Breaking the Entry Barrier" because we need all the advice we can get. It is so hard to acquire capital to work with.

In my practice program I have nine beef

cattle, 13 head of swine, five acres of corn and a home garden.

Lee Neisler

Davenport, North Dakota

As the pastor of two rural North Dakota churches, some 24 miles from Fargo, North Dakota, I am constantly on the search for materials for use on special Sundays.

I am especially interested in getting new materials for Rural Life Sunday, Soil Conservation Sunday, etc.

I am writing to you, therefore, to inquire as to whether or not you would have materials such as: Liturgies, prayers, Orders of Service, Responsive Readings.

Any information you can send me in this connection will be greatly appreciated.

John H. Johansen

Our only information is about use of FFA Church Program inserts during FFA Week. Many chapters provide these inserts for their local churches.—Ed.

Tempe, Arizona.

Thank you for mailing our first issue of *The National FUTURE FARMER*. By summer of 1970 we will move to our 680 acre farm in Nebraska. Since this is a new life for my boys, I like to get them all the literature possible to get ready for the new environment.

Once back on the farm, we will engage in cattle raising and hogs. Wheat, corn and sorghum will be our grain crops. If there are any late books or research studies that have been conducted, and you recommend, we would appreciate you sending us the list.

Thank you for your help.

H. R. Rohde

Grifton, North Carolina

I would appreciate any information on obtaining an FFA loan for buying a farm and starting in this business. I would appreciate information such as: the age I must be in order to obtain a loan, the scholastic average I will need to maintain, the amount of savings I should have in the bank, and the FFA background I will need.

Thank you for any information you can give me.

William L. Cox

We do not know of an FFA loan which you can get for buying a farm. There is no loan program carried out by the organization. We have heard of a few local FFA chapters that have established loan programs for their members. Usually, these are small loans of a production loan type. But we have not heard of any big enough for buying a farm.

Perhaps you could discuss this with your local Vocational Agriculture teacher, and he could tell you of any local sources for borrowing money to buy a farm.—Ed.

Chattham, Louisiana

I would like to know if you would give me the information to the location of "Cal Farley's Boys Ranch" in the Texas Panhandle. The ranch was referred to in the 1969 April-May issue of *The National FUTURE FARMER*.

Jack Samples

The official address for Cal Farley's Boys Ranch is: Boys Ranch, Texas 79010.—Ed.

Brattleboro, Vermont

Mr. Lacey is to be congratulated on the fine article appearing in your February-March issue entitled, "Oral Reasons Added to Judging Contests." We would also commend your organization for taking action to include oral reasons in your contests. I feel they are one of the very important educational opportunities available as the result of taking part in judging contests.

As you know, we have a number of brochures and booklets with regard to the youth program of HFFA. Some of this is geared particularly to judging contests and the show ring in general. Would there be any objections to our reproducing some of the material found in Mr. Lacey's article? In particular, we are interested in including some of items listed on page 37, "Things to Do . . . Things Not to Do." While coaches differ somewhat in the instructions they give for oral reasons, the items listed on page 37 are all, I feel, quite sound and would not contradict anyone else's thinking in this area. The greater circulation this sort of information has among our young people, the more opportunity for success in judging they will have.

Thank you for your help.

David C. Diehl
Director of Information
Holstein-Friesian Association
of America

Mooreland, Oklahoma

I am a new member of the FFA, and I enjoy it very much. I received my FFA magazine yesterday and thoroughly enjoyed the article on judging. The tips on welding are interesting, also. Thank you very much.

Mike Parker

Stanley, North Dakota

Since the Stanley Future Homemakers had served as waitresses at the Future Farmers Banquet, the FFA boys were the waiters at the first annual FHA Banquet held in Stanley.

The FFA'ers all looked handsome in their white shirts and dark FFA neckties carrying plates of food and coffee pots!

A Stanley FHA member

P. S. Please don't use my name. I'd never hear the end of it!

Middleton, Idaho

I would like to congratulate you on the article concerning oral reasons in the February-March issue. I read your article with much interest, since we in Idaho have no contest in which oral reasons are required. This has always been of interest to me because placing a class of animals without definite reasons and the ability to express those reasons is useless. Therefore, I feel that the National Board of Directors made a good move and likewise you made a good move by providing the facts to the FFA members.

Terry Crawford

When Winter Weather Strikes

FFA members found many projects that needed doing despite the effects of winter storms.

By Jack Pitzer

A SERIES of bad winter storms created plenty of havoc in the U.S. this year. It hit some areas of the nation during National FFA Week, and hampered plans of the chapters there.

Here are some stories we've heard that center around bad winter weather.

Roseburg, Oregon, FFA reports shoveling snow off homes and barns to keep them from collapsing. Six to ten members worked four days shoveling snow off a county sale barn. Also, they hauled food to snowbound families with four-wheel drive pickups; and they hauled hay to a helicopter that was supplying stranded sheep herds.

The Oregon Future Farmer reports that several district and sectional public speaking contests were postponed until the weather broke, and there were several reports of FFA member livestock losses during a January storm.

Only ten members made it to the February meeting of the Viborg, South Dakota chapter because of bad weather according to reporter, Donley Frederickson. The Wolsey, South Dakota, Chapter had bad luck with FFA Week activities. They had to postpone their Parent-Son banquet scheduled for February 21, and postpone their Sweetheart Ball scheduled for February 22.

Ulen, Minnesota ran an article in their local paper, asking residents if they knew the locations of any pheasants so the chapter could make feed accessible.

In Grove City, Minnesota the Grove City Bank furnished free dinners for FFA members who spent a Saturday distributing 850 pounds of corn to pheasants. The corn was donated by the Farmers' Elevator and the bank.

Faribault FFA, in Minnesota combined forces with the Sno-Go Snowmobile Club to provide feed for pheasants. The Snowmobile Club provided the transportation to get the feed, which was collected by the FFA, to locations

Scott Friesen, driving snowmobile, and Nathan Fast take corn, which was donated by a local firm, to pheasants.



Officers of the Mountain Lake, Minnesota Chapter took corn to feeding stations for pheasants during the snow.

that the pheasants could get to.

And Kenyon, Minnesota set out 40 feeders and boxes of grit for pheasants and other game birds. They worked with the local game warden and sportsmen's club. The FFA appointed a Save-The-Birds Committee.

Meanwhile, the Willow River, Minnesota, FFA was out to save deer. Their chapter was organized into eight groups of four to five members each. Each of these groups picked an area where they felt deer were wintering. The groups all had snowmobiles and went out each weekend to make trails and to observe the condition of the yarding area and the number of deer present.

This effort grew into a community effort with a deer yarding map of 40 different locations posted in the vo-ag shop. Some members put out hay to provide supplement feed for deer.

"Red Flags For Safety" was the theme of a Save-The-People effort of Ivanhoe, Minnesota, FFA. Since the Ivanhoe area got so much snowfall, it became almost impossible to find a place to pile the snow.

Thus, the curbs of residential streets were piled five and six feet high during National FFA Week, with more snow expected.

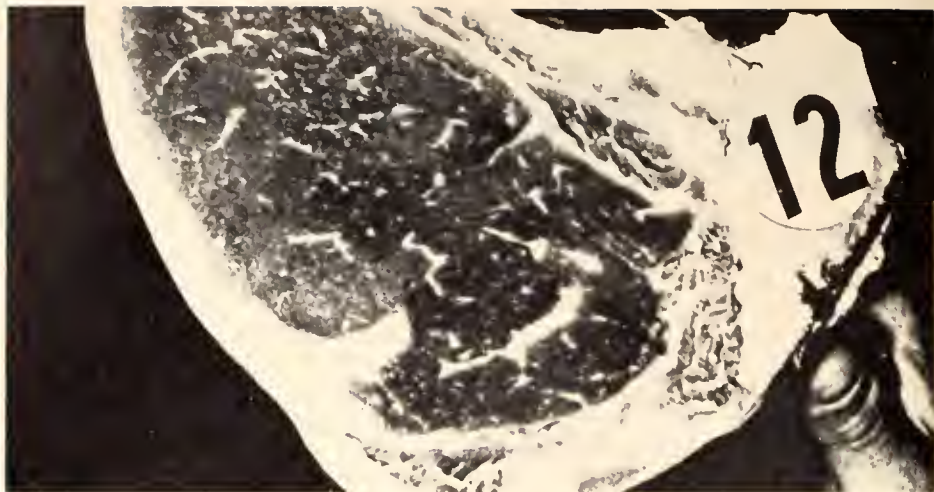
The FFA provided red safety flags to tie onto car aerials. Then, when cars were deep inside a "tunnel" of snow, you could see approaching vehicles on cross streets at intersections. They attached 95 flags to parked cars on Main Street and at intersections.

Yes indeed, FFA chapters adapt quickly when bad weather strikes. Even National President Jeff Hanlon had to carry his suitcase three miles to get off his ranch for the National Goodwill Tour.

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eye
and
judge's
eye

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The National FUTURE FARMER



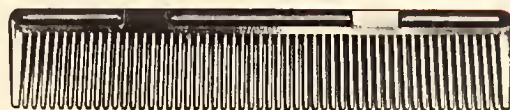
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This Special Offer Expires August 31, 1969

YOUNG men breaking the entry barrier into farming will find the task much easier if they learn how to use the futures market as a management tool. By trading futures contracts prior to marketing their livestock and crops, farmers of the future will benefit by saving interest and borrowed capital, reducing operating costs, and obtaining bigger loans for expansion.

It is likely, that a farmer who can not estimate the selling price which he will receive for a crop at harvest time, will get a loan of only 70 percent of his collateral. On the other hand, a farmer who can state, with some degree of authority, the selling price of his crop or livestock, will be able to obtain a loan of about 90 percent of the value of his commodity. Therefore, trading in the futures market can be a great asset because it enables you to set the selling price in advance.

• **Who makes trades?** Less than three percent of the commodities traded on the futures market are actually delivered. With this in mind, it becomes evident that most farmers and processors trade in the futures market for another purpose.

The farmer wants to insure a margin of profit by establishing a good market price for his product. The processor, on the other hand, wants to assure a supply of goods and set the price of that supply. To do this they both hedge. That is, they take a position in the futures market opposite to that which they hold in the actual or cash market.

If a farmer has cattle or crops which he plans to deliver to market at a later date, he sells a future contract. This is called selling a hedge and is used for protection against a price decline. If a processor must deliver a certain amount of a product at a future date, but does not have it on hand, he will, in turn, buy a contract. The buying hedge, as it is known, protects the processor against a price increase.

The general public also trades in futures markets. As a speculator, he assumes risks that others do not want and tries to take advantage of rapid price changes with hopes of making a profit. Whereas the hedger trades over a long time interval, the speculator buys and sells contracts daily. Both the speculator and the hedger need each other, because without either trader, entry and exit in the market would be impossible.

• **How to hedge.** In general the steps for making a hedge are quite easy. First, forecast your production in advance so that you can determine how many contracts to sell. Then, sell the contracts for the month when your product will actually be marketed. Finally, buy back the contracts in the month when you sell the product on the cash market.

HOW TO USE FUTURES MARKETS

As mentioned in the article "How to Study Futures Markets" in the April-May 1969 issue, the secret to making a successful trade in the futures market depends on your study of the market situation. This means that you need to know the levels at which you should buy or sell contracts. To do this, check the prices of the raw product and figure your operating expenses and storage costs. In addition, check on the futures prices for the months when the product will likely be ready for market. Also, determine the basis, as explained in the above-mentioned article, for your area during these months and decide how much of the product to hedge. Be sure to call your broker for advice before making your final decision.

Because of the nature of raising agricultural products, a farmer will usually use what is called a short hedge. In this case, he will sell and buy back his contract within six months because this is the amount of time it takes to produce and sell most farm products. In some cases, however, a farmer may wish to hold a contract for a longer period of time, probably because there is a profit advantage in storing the commodity for a while after harvest.

• **Setting the price.** By selling a crop on the futures market in advance of harvest, or even planting, a farmer can establish or set a target selling price. Hedging like this works much like forward contracting the sale with your local elevator. However, trading in the futures allows the farmer to

achieve the same price advantage as forward contracting, but at the same time maintains the choice of time and place of sale.

Assume that January live cattle futures are bringing \$30.00 per hundred weight and that the basis is usually \$2.00 below the January price. This means that the local price will be about \$28.00 in January. If, after estimating your costs, you decide that this price will give you a good profit and sell a contract, you have established a selling price.

If the January price (Example 1) rose to \$31.00 a hundredweight, you could buy back your contract for a dollar loss. On the actual market you are able to sell your cattle for \$29.00 per hundred pounds. Thus, the market performed as expected by giving you a net return of \$28.00. In this example you would have made more money by not entering the futures market. However, you then assume the risk of a price decline.

If the price (Example 2) fell to \$27.00 per hundred pounds by January and the basis was estimated correctly at \$2.00, the local price would be \$25.00. You could then buy back your contract for a \$3.00 profit, sell your cattle, and receive a net return of \$28.00 as predicted.

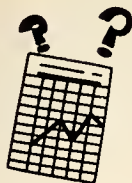
Hedging can also assure you of a storage payment. By selling a futures contract at the time of harvest against wheat, for example, it may be possible to establish a more favorable selling

EXAMPLE 1.

June sell January futures at	\$30.00
January buy January futures at	\$31.00
Loss on futures	\$ 1.00
January cash from sale of cattle	\$29.00
TOTAL RETURN	\$28.00

EXAMPLE 2.

June sell January futures at	\$30.00
January buy January futures at	\$27.00
Profit on futures	\$ 3.00
January cash from sale of cattle	\$25.00
TOTAL RETURN	\$28.00



By Ron Miller

price and at the same time earn a return on storage. To illustrate, suppose the price of wheat at the local market in September is \$1.05 per bushel, and the current price for a March contract is \$1.40. With a usual basis of 5 cents per bushel you could receive about \$1.35 per bushel by holding your wheat in storage. This means an increase of 30 cents per bushel for storing your wheat until April.

If the price (Example 3) of the March futures contract increases to \$1.45 by March, the local price with the usual basis of 5 cents, would be \$1.40. You could then buy back your contract for a 5 cent loss, but at the same time sell your wheat to the local elevator for 35 cents more per bushel than in at harvest time. Thus, realizing a net of \$1.35 as desired.

On the other hand, should the price (Example 4) go down to \$1.25 by

EXAMPLE 5.

October buy April futures at	\$1.15
April sell April futures at	\$1.25
Profit on futures	\$.10
April cash paid for feed corn	\$1.20
TOTAL COST	\$1.10

March, and you decide to close out your contract, you will make a profit on your futures contract of 15 cents. By adding the contract profit to the local market price of \$1.20 at the usual basis, you arrive at your objective, a net return of \$1.35.

The futures market can also be used to set the price of extra feed purchased for the livestock operation. For instance, at the time of harvest, the price of corn will be at its lowest, yet storage can be a big problem. By buying a contract you can set the price in advance and still not tie up capital, provide storage space, or risk spoilage. To explain, in October the cash price for corn may be \$1.00 per bushel and the April futures contract is \$1.15 per bushel. With a usual basis of 5 cents for corn delivered in April, the local expected price, including the cost of storage until April will be about \$1.10.

EXAMPLE 6.

October buy April futures at	\$1.15
April sell April futures at	\$1.10
Loss on futures	\$.05
April cash paid for feed corn	\$1.05
TOTAL COST	\$1.10

Suppose that by April the price (Example 5) for corn futures increased to \$1.25, and the cash price was \$1.20 per bushel. By selling your contract for a profit of 10 cents, the total cost of your corn was \$1.10, a savings of 10 cents.

If the price (Example 6) of April corn futures declined to \$1.10, you would lose 5 cents on the futures transaction. However, the cash price paid for corn at the usual basis would be \$1.05 per bushel, and your total cost for the feed corn would be the price set in advance, \$1.10. Notice, in this trade, the cost for corn would have been less if you had not speculated in the futures market, but your risk of increasing April prices would have been greater.

In all of the above examples, the time of selling the futures contract remains flexible. So, if the market changes and you decide to close out your futures transaction early you are free to do so. However, in each case, you must refigure your total return because the basis for each month can vary.

Using the futures market as insurance against adverse price changes requires a certain amount of study and patience. Yet, the successful producer of agricultural commodities will need to reduce the risk of these price changes as much as possible. Therefore, the farmer who sets the selling price in the futures market can set a bright future for his farm.

EXAMPLE 3.

September sell March futures at	\$1.40
March buy March futures at	\$1.45
Loss on futures	\$.05
March cash from sale of wheat	\$1.40
TOTAL RETURN	\$1.35

EXAMPLE 4.

September sell March futures at	\$1.40
March buy March futures at	\$1.25
Profit on futures	\$.15
March cash from sale of wheat	\$1.25
TOTAL RETURN	\$1.35

AGRICULTURE continues to rank third among American industries in accidental death rate. In awareness to this fact, the National Safety Council suggests that every farm family should have a safety engineer—someone with the responsibility of alerting other family members to hazards and seeing that safety rules are followed. This may be your mother, father, or you, the FFA member.

To do this, you might hold a family safety conference. Let each family mem-

ber report on "near misses" he may have had. Discuss what can be done to prevent a reoccurrence. Then do it!

Families working together can reduce the tragic toll of farm accidents if only you will be your own safety engineer . . . not just during Farm Safety Week, but for 52 weeks out of the year.

NATIONAL FARM SAFETY WEEK

JULY 20-26 1969

MANAGE TO PREVENT ACCIDENTS!



The Leonard Fuller family: seated are daughter Laraine and Mr. and Mrs. Fuller; standing, from left to right, Wayne, Bill, Lee, Dick, and Terry.



Five Sons, Five Farmers

All five Fuller brothers have chosen to remain on the farm and each one has received the FFA's American Farmer Degree.

By Wilson Carnes

PEOPLE who say farming is no longer a way of life just haven't dropped in on the Leonard Fuller family of Clark, South Dakota. Those who do are greeted with a warm welcome by Mr. and Mrs. Fuller, daughter Laraine, and their five sons: Bill, Lee, Dick, Terry, and Wayne.

The Fullers are still farming in the same community where they grew up. Their combined operation totals 2,560 acres, and includes beef cattle, sheep, and crops.

Bill, 29, is the oldest and the only son married. He received his American Farmer Degree in 1960, and served as president of the South Dakota FFA Association.

Lee is 28, and received his American Farmer Degree in 1962 and Dick, 26, received his degree in 1963. Both Terry, 24, and Wayne, 23, received their degree in 1968 after each had served two years in the U.S. Army.

Mr. and Mrs. Fuller were on hand at the National FFA Convention last fall to see Terry and Wayne receive their degrees. When I visited with the four of them at that time, you could detect a certain restlessness caused by their desire to get back to the farm. Another thing was obvious too—the peace of mind that comes from finding out what you want to do and doing it, or as we say today, “doing your own thing.” They like to farm and that is where they want to be.

The operating arrangement of the five brothers and their father is hard for an outsider to understand. Yet it seemed quite clear to Terry and Wayne as they tried to explain it to me with an occasional nod from their

father. As Wayne put it, “We’re farming together, but independently.”

There is no formal written agreement—yet they have never had an argument. They explain that by working together they can farm a lot more land. They pool their machinery and purchase the larger pieces together.

The brothers help each other put in crops and do other field work, but Wayne explained that they all have specialties. Bill plants corn. Dick runs the swather. Lee runs the combine. Wayne and Terry do the plowing. “In fact,” Wayne added, “Terry plowed practically all spring, summer, and fall.” They also consider Bill the bookkeeper or secretary for the overall operation even though they each keep their own business records.

Wayne explained that when they settle up on Saturday, “We sit around a table, write a lot of checks and a lot of money changes hands, but it all stays in the family.”

Terry and Wayne have come the nearest to operating a true partnership of any of the brothers. They were in the same grade all through high school and their farming programs were about the same. They were in partnership on their crop land while in high school and continued their agreement after they graduated.

They were inducted into the Army nine weeks apart. While in the service, Terry and Wayne had to let their farming programs lie dormant. They dropped a half section of land and 40 sows since it was just too much for the rest of the family to handle. The Fullers bought bigger equipment to cut down on labor. For example, they had four combines which they replaced with two larger ones and now harvest as much with two as they previously did with the four.

The Fullers have successfully substituted machinery for



This trailer for hauling livestock was built in vo-ag shop by Terry and Wayne.

labor. They use no hired help except at shearing time. They have nine tractors in all, including five big ones.

To hold down their equipment inventory, they make their machines do more than one job. As an example, they took their swather and converted it to a sprayer at a small cost. After deciding what they wanted, they took it to their blacksmith who made the adaptation for them. A major feature is that the whole tank will let down for water to run into it, and will raise for clearance.

Another example of how they save on equipment is the trailer built in the vo-ag shop by Wayne and Terry. An old house trailer was cut down and shortened. The sides will fold up so that it is twice as tall as its normal height. With it they can haul 70 head of 100 pound feeder lambs in a double deck. The top deck can be removed to haul cattle and hogs. It cost \$346 to build and Terry says, "We wouldn't take \$1000 for it." They now have two of these trailers which replace two trucks.

The Fullers also save on labor by doing all their plowing and sowing at the same time whenever it is possible to do so. When they plant flax, for example, they plow, pack, and press drill all in one operation—everything except the spraying.

In spite of all the work required for their own operation, the Fullers do find time to do some custom combining of corn for their neighbors. But this only because it fits into their own harvesting program. They use a dryer for their corn and it takes three days for the corn to dry. They can fill their dryers in two days so they custom combine on the third day.

When asked what part he has in the operation, Mr. Fuller replied jokingly, "I run after parts." Terry was quick to add, "And that is a fulltime job." In addition, Mr. Fuller admitted that he does some field work during the busy season in the spring, such as putting in fertilizer.

The Fullers are particularly proud of their Hampshire sheep which they show extensively at agricultural fairs and have a trophy case full of trophies to show for their efforts. They also sell breeding stock, with buyers coming from neighboring states. They consider the shows good advertising. Usually one member of the family will take the sheep to the show and the others will come down later. Only one exhibitor has shown longer at the South Dakota State Fair than the Fullers. They have shown as far south as the American Royal in Kansas City, as far east as the International in Chicago, as far west as Ogden, Utah, and as far north as Minnesota.

Mr. Harold Urton, former state FFA advisor, now retired, has worked closely with the Fullers over the years, so we asked him to what did he attribute their success. His reply was, "Hard work, good management and pride in what they are doing." He also said that cooperation and help of the family had made it possible for each son to remain on the farm.

The present state FFA advisor, Mr. E. W. Gustafson, has also had quite an influence on their agricultural careers. He was the advisor of the three oldest sons and for Terry and Wayne during the first year they were in vocational agriculture and the FFA.

The family's cooperation is also exemplified in their car ownership. Since Bill is married, he has his own car, but Lee and Dick own one together as do Terry and Wayne. "And still they have to borrow mine sometimes on Saturday nights" Mr. Fuller quipped.

The Fullers are carrying on a family tradition that started back in 1882, when Mr. Fuller's great grandfather settled there—the first to settle in Fox township. Mr. Fuller has lived all his life within a seven mile area, and on the present farm since 1941.

So, if you think there is no future in farming, don't tell the Fuller brothers. They won't believe you.



This aerial photo shows the layout of the Fuller farmstead. The 2,560-acre farm is 12 miles from Clark, South Dakota.

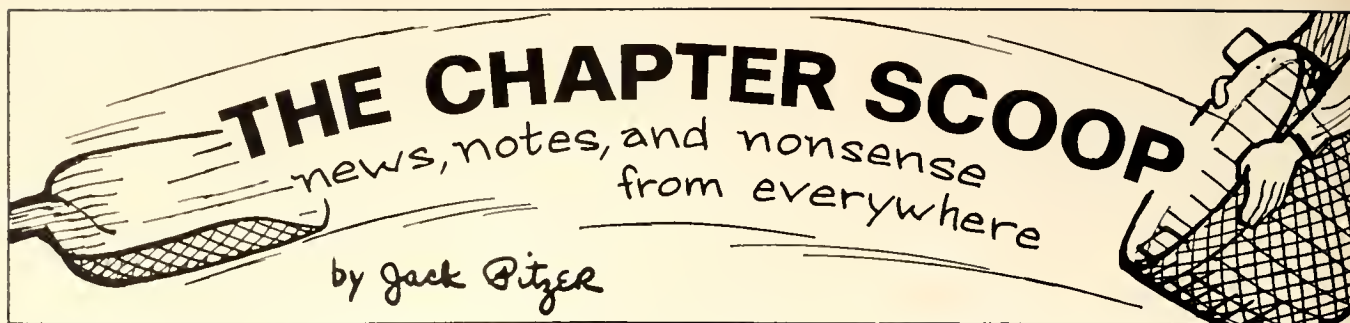
The Fullers make good use of machinery in their farm operation. By exchanging labor, they can farm more land.



THE CHAPTER SCOOP

news, notes, and nonsense
from everywhere

by Jack Pitzer



Tift County, Georgia, FFA members dressed up the courtyard at their school with landscaping and a cement "T".

N-N-N

What contributions does your chapter make for Rural Life Sunday in your community?

N-N-N

Annual project of Saline, Louisiana, FFA is cooperative seed order for members and local farmers.

N-N-N

Sherman, Oregon, members own "Ceaser", a registered Charlaois bull calf. Won him as prize at judging contest of breed association.

N-N-N

"School Spirit Week" is idea of Beardstown, Illinois, FFA. Competition among classes. Prize—early dismissal for lunch for one week!

N-N-N

May be a good gesture to get permission to use the gym for basketball or to use other school facilities.

N-N-N

Charleston, Missouri, members have an annual Father-Son Fish Fry in the spring. Also, they give Outstanding Senior in Vo-Ag award.

N-N-N

Silver Lake, Massachusetts, FFA sold 100 wreaths and mistletoe at Christmas. They bought the pine boughs for the wreaths from White Mountain Chapter of New Hampshire.

N-N-N

Ladd Holman, Delta, Utah, was named "Most Valuable Player" in Class B Championship football game.

N-N-N



Word is out that boys in vo-ag class and the home ec. girls swapped teachers as well as classes for one week in February at Cabot, Arkansas.

N-N-N

In Custer, Oklahoma, FFA chapter joined with Young Farmers to sponsor a lamb fry and marketing clinic.

What a prize! A horse collar goes to Agua Fria, Arizona, Chapter as top prize for hard work to win FFA Field Day at state university.

N-N-N

Doug Marin won \$3.00 at Hobby & Talent Night of Flatland, Montana.

N-N-N

Snake River, Idaho, FFA is proud of fellow-member, Ron Gentillon, new state leadership convention reporter.

N-N-N

Two waitresses from each class in school served Parent-Son Banquet in Lennox, South Dakota. Greenhands of FFA and FHA served banquet at C. T. Smith Virginia Chapter.

N-N-N

Woodstock, Illinois, reports that they had ten beautiful GAA girls to serve their Parent-Student Banquet.

N-N-N

Apple judging team at Chelan, Washington, won the state contest.

N-N-N



According to Dan Andrews, the Ansley, Nebraska, Chapter had a rough time harvesting their corn plot. He suffered two cracked ribs. (Chapter paid the doctor bill)

N-N-N

Five youth rodeos were staged this year by Ocala FFA in conjunction with eight other chapters in Florida.

N-N-N

Dave Corry lucked out again and won the door prize at the meeting. Two times in a row for lucky Dave of Watertown, South Dakota, FFA.

N-N-N

Idea: Have junior officers fill in when regular officers are absent.

N-N-N

Dillon, Montana, Chapter voted to buy a Polaroid camera at drug store.

N-N-N

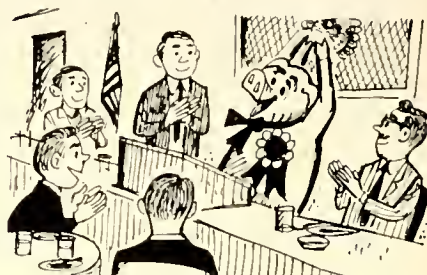
Ever tried miniature golf for summer chapter recreation? Wellington, Missouri, chapter did.

N-N-N

Eight members of Salem, Illinois, Chapter and their dates square danced for entertainment of local nursing homes.

Ponaganset, Rhode Island, Chapter visited at FFA Center during trip to Washington, D.C. Then they visited one night with Grassland, Pennsylvania, FFA on the trip home.

N-N-N



As part of 1969 Pork Week promotion, innovators of Redwood Falls, Minnesota, FFA held civic luncheon and introduced the "Chapter Porky".

N-N-N

Robert E. Lee Chapter in Virginia initiated 67 Greenhands. They held open house for parents, too.

N-N-N

Members of Enola, Arkansas, FFA earned \$100.00 from a clean-up campaign. Destroyed old buildings.

N-N-N

Ninnekah, Oklahoma, FFA started a Quarterhorse judging team. Members are Dave Martin, Ronnie Scribner, Jerry Martin and Delbert Reed.

N-N-N

North Hollywood, California, had its chapter banner stolen.

N-N-N

Boonsboro, Maryland, FFA have a Farm & Home Products Show.

N-N-N

Jackie Jackson, Longview, Texas, Future Farmer has a herd of 33 registered Angus cattle.

N-N-N

Buena Park FFA in California held open house for 1800 junior high students during FFA Week.

N-N-N

Indian Valley, Ohio, FFA was honored by Parents' Magazine for community service during last year. Congratulations!

N-N-N

Woodstown, New Jersey FFA received recognition from the State Canners and Food Processors Association.

N-N-N

Interlaken, New York, Chapter sponsored a roller skating party in the afternoon for first through sixth graders.

N-N-N

What's going on in your chapter this summer? Share those good ideas.



Princeton FFA advisor George Linder

Involved Members STIMULATE Community Growth

By Jerry T. Davis

HOW does a small agricultural community entice its youth to stay in the area or return after college?

In Princeton, California, a small town in the central Sacramento Valley, people believe that a good community program in vocational agriculture is the answer. Thirty-two of the 36 boys in Princeton High School are members of the local chapter. Past experience indicates that 28 of these 32 members will work in farming or closely related industry—and will be in an area not far from Princeton. Many of these 28 will earn college degrees before returning to agriculture and to Princeton.

The economy of the area is based on agriculture. So, why shouldn't a good vocational agriculture program strengthen the economy and contribute to maintaining a source of trained personnel for Princeton's industry?

When Mr. George Linder, the vo-ag teacher, came to the small community 12 years ago, he began to lay the ground work for a program that would raise the economy of the area. He approached the problem with the philosophy that you have to get students involved in agriculture. To maintain their interest they need some worthwhile and enjoyable experiences. They also need to understand that there's a place for them in the community.

The chapter started by forming a foundation under which they could engage in business. They made agreements to take over an 8-acre prune orchard owned by the high school. The chapter also located small and often odd-shaped pieces of land on which they could develop productive enterprises. This land included 45 acres for rice farming and some acreage for other grain crops. As a new grower, the chapter foundation was able to raise only 32 acres of rice. They now have 45 acres.

Leases were drawn up and the foundation entered into a share crop agreement with the land owner. However, the idea was not to farm the land as a

chapter project, but to sublease the land to chapter members. In this way the members became the managing operators and owners of the crop.

The sublease included such requirements as keeping records, growing registered seed, and supervision by the vo-ag instructor. But probably the most important condition of the sublease was that the student agreed to set aside a



The members assist the pilot by helping to load the plane with rice seed.

Members must clean the combine before harvesting rice for certification.



portion of his earnings until the July following his high school graduation. This is called an earned scholarship, and while it is not required, it is hoped that the money will provide incentive for the FFA member to continue his education.

In 12 years members of the chapter foundation have grossed \$90,000. They have paid \$26,000 in rent, \$19,000 for seeding, and \$14,000 for custom harvesting. During this time, the chapter has accumulated \$8,000 worth of equipment by buying used machinery and rebuilding it. This year for the first time, because one member bought and overhauled a combine, they were able to do their own harvesting. During the summer months the shop is kept open so that the equipment is kept in good repair.

Chapter members consider both quantity and quality important to their enterprises. They changed from producing non-certified to certified grain and use commercial fertilizer. Last year their rice crop averaged 5,900 pounds per acre, well above the county average.

In addition to crop farming, the chapter members operate swine enterprises on the same basis. So that every class becomes active in the foundation, members are allowed to work from the less expensive to the more expensive programs.

Freshmen and sophomores lease the prune orchard or swine projects. Juniors lease rice acreage and seniors can lease barley, wheat or milo acreage. This arrangement allows seniors a chance to complete the harvesting of their crops before leaving for college and maintains continuity in the total program.

The program has not only been rewarding to Princeton FFA members, but it has contributed to the success of the community. Many businessmen and farmers owe their beginning to it. Citizens and FFA members of Princeton truly believe, "if you want to learn something, do it."



The School of Agriculture of Falsalice where the 1968 national convention was held is situated in a beautiful valley.



The National President of the Future Agriculturists is seated in the front as I address the convention audience.



The champion bricklayer takes a breather after winning the national finals.



I had the opportunity to visit several supervised farming programs. Here we are looking at a member's coffee crop.

A Journey South

By Joe Martinez, National Vice President of the Pacific Region

THE National Organization of FFA has cooperated in establishing organizations much like FFA in other countries. These programs have continued to grow and several organizations have held national conventions.

Last fall the National Organization received an invitation for a representative of FFA to attend the Second National Convention of the Future Agriculturists of Colombia. Because I spoke Spanish, it was decided that I should go to the convention and, on the way back, visit the Future Farmers of Panama. The main purpose of the trip was to bring greetings to the convention on behalf of the FFA and to exchange ideas with the two organizations.

The programs of vocational agriculture in all schools in Colombia is supported by the Ministry of Education. However, the Federation of Coffee Growers has built and operates 21 agricultural schools in various states. The Ministry of Education manages 41 other agricultural schools, and several are operated by the Catholic Church.

The age of vocational agricultural students, both male and female, ranges between 13 and 18 years, although there is no upper age limit. The girls receive instruction in home economics and all students learn Spanish, their native tongue, and a foreign language, usually English. Other subjects taught are only those related to agriculture such as science and math. Various schools throughout the country teach business, liberal arts, and other courses.

The Future Agriculturists of Colombia is directed by three members of the Ministry of Education and three members of the Federation of Coffee Growers. This national committee, of which the youngest member is about age 36, serves as national officers for the organization. They hope someday to have the members of the Future Agriculturists serve as national officers.

In Bogota, Colombia one of my first duties was to help prepare for the convention. Also, while in Colombia, a member of the Ministry of Education or the Federation of Coffee Growers accompanied me on side trips through the rural areas. In addition, much of my time was spent interviewing on radio and television. Many of the radio programs were local, but one station broadcasts in several European countries and all of South America. The television programs were carried throughout the country on the only channel in Colombia.

After all the preparations for the convention were made, we travelled by car to Fusagasuga, a rural town just down the mountains. There, at the School of Agriculture of Falsalice, was to be the scene of the convention.

The convention was held in December, and, except for the two or three times it rained, the sessions were held out-of-doors. Many contests were conducted during the convention, including a public speaking contest much like the one in Kansas City. Other contests included the national finals for horseshoeing, bricklaying, tree planting, coffee judging, butchering rabbits, and shed building demonstrations.

Although the students presented the opening ceremony in Spanish, the rest of the convention was conducted by adults. Many dignitaries spoke to the group and, after delivering my greetings address in Spanish at the third session, members asked many interesting questions about America and the FFA. The last session, at which I gave my farewell speech, was highlighted by performances by several comedians.

My host while in Cali, Colombia was the Nicholas Mendez family. Doctor Mendez, who is a retired State Supervisor from Puerto Rico, now lives in Colombia and still works with vocational agriculture. One of the many agriculture schools we visited was organized by a private company to train students for vocations.

In Panama, Professor Ricardo Lopez was my host as I visited the National School of Agriculture in Divisa. During that time I had the opportunity to talk with the national president and members of the Future Farmers of Panama. Professor Lopez also showed me the country and the Panama Canal.

After such a trip, one can't help but feel that the FFA program in South America has great potential. The adults and students showed great enthusiasm and many expressed a desire to come to America to attend our National FFA Convention.

The National FUTURE FARMER

KNOWING YOUR COSTS

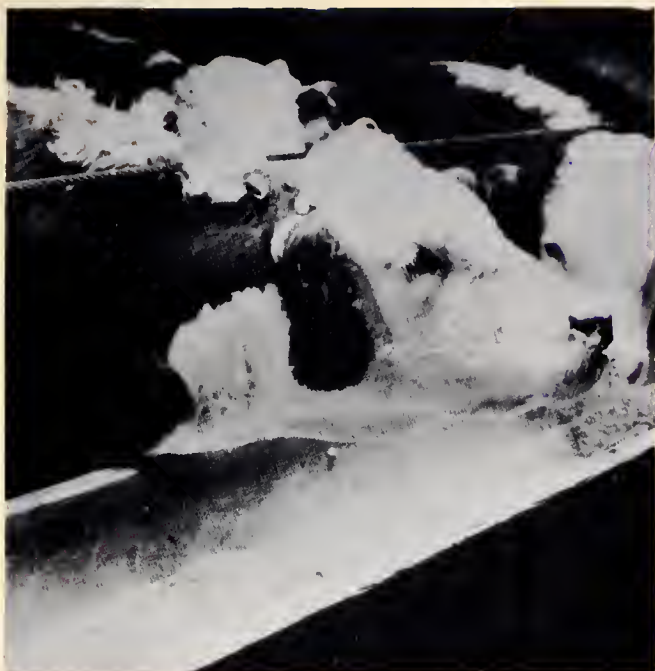


Photo courtesy of Wayne Feeds

A CATTLE feeder encounters two basic costs in his operation—feed and non-feed. To one feeder, non-feed costs may mean something different than to another. Likewise, the best way to cut feed costs depends on the feedlot and crop operations. But to all livestock feeders, knowing and cutting costs is a common goal.

• **Non-Feed Costs.** The most obvious non-feed costs are death losses and veterinarian expense. These expenses usually run about 10 percent of the total non-feed costs, and in most cases, can be reduced by using good management and sanitation practices. Taxes, insurance, fuel, electricity, shelter, depreciation, and repairs generally run a little less than 30 percent of the non-feed expenditure. Although these costs can be limited by being efficient, most of them are fairly stable within a given location.

Interest on borrowed money for cattle and other facilities is the largest single non-feed cost. Large feedlot operators generally find this expense to be about 30 to 35 percent of their non-feed total. The best way to minimize interest expense is to adapt the financing program to a planned feeding and marketing program, and stay within the credit limit of the operation.

Labor costs make up the remainder of the non-feed expenditures. In major feedlots this can be 25 to 30 percent of the non-feed costs. To lower labor costs many operators are utilizing off-season or otherwise wasted labor.

Studies have shown that non-feed costs for keeping cattle in a feedlot average about 12 cents per day per head. Efficient operators can reduce this cost by as much as 25 percent. Considering that non-feed costs usually approximate 25 percent of the total cost per hundred pounds of gain, this can be a real savings.

• **Feed Costs.** Many factors affect feed conversion which in turn influences feed costs and ultimately profits. The factor which affects feed conversion the most is the genetic

Take the first step to seizing profit opportunities. Determine all of your feedlot costs and innovate to minimize them.

By Ron Miller

potential for rate of gain. Animals bred for faster gains require less feeding time to reach market weight, thus reducing the amount of feed needed for body maintenance.

Not only does the degree of finish affect the market price, but it also influences feed conversion. Because it takes more feed to produce fat than muscle, meat-type animals gain more efficiently than over-finished cattle.

When buying cattle keep in mind the weight and age of the animals. Maintaining the weight of larger animals requires more feed than preserving the body weight of smaller animals. This leaves feed available for actual gain.

Since feed efficiency becomes poorer as animals put on weight, the heavier cattle are when bought, the greater the cost per pound of beef produced. However, older cattle weighing the same as younger animals usually show an improved rate of gain. They become more efficient and compensate for an earlier setback by outgaining the younger animals.

Abnormal seasons, both hot or cold, reduce the rate of gain. Because more body heat is lost trying to keep the animal warm in cold weather, feed conversion is poor. On the other hand, in extreme hot weather cattle eat less and in this manner lengthen feeding time, consume more feed, and gain slower.

Cattle diets that contain a proper balance (ratio and level) of proteins, energy, minerals, and vitamins gain the most efficiently. Also, feeding roughage to growing animals produces relatively efficient gains, but in finishing rations grain yields the better feed conversion.

In addition to these diet factors the type of end products (acids) in the rumen influences feed conversion. Grinding, cracking, flaking, and moisture also cause a difference in feed efficiency. In most cases non-nutrient additives (hormones and antibiotics) affect the rate of gain, although some of the newer ones will result in improved feed efficiency. And, of course, the type of roughage and grain also affects the conversion rate.

To get the true picture on total feed costs, livestock feeders need to adjust for shrinkage when cattle are purchased or sold by weights taken off the feedlot site. Most of the total shrinkage occurs during loading and the first two hours of shipping. Although cattle on high moisture feeds will shrink more than feeders on dry, high energy feeds, a 3 percent shrink is an average figure which can be applied to starting and finishing weights when estimating shrink costs.

As you can see, feed conversion determines to a great extent the length of time cattle are on feed as well as the feed costs for a feeder operation. Indirectly this can make a big difference on the non-feed costs of the operation. Reducing the time it takes to feed out cattle will also increase the number of head fed out within a year. In the end, this means more profit for the efficient cattle feeder—because he can produce more pounds of beef at a lower cost per hundred pounds of gain.

Building A Herd

GLENN Weber, national vice president for the North Atlantic Region, began FFA and vocational agriculture in the Grassland Chapter by raising broilers on contract. Because his father operated a hatchery on the farm near Mohnton, Pennsylvania, Glenn had excellent market potential. The first year he raised 2,200 broilers and the next he increased to 7,500 birds. Glenn continued to increase his profits by raising 24,000 broilers the following year.

Meanwhile, the young farmer became interested in dairy cattle, and through steady management, Glenn increased his cattle numbers to 30 Holstein cows plus young stock. His cows now average 10,000 pounds of milk per cow and test 3.97 fat. Glenn has also achieved silage yields of 25 tons per acre and corn yields of 140 bushels per acre. Besides corn, he grows alfalfa, barley, sudax, and wheat.

When his father retired, Glenn assumed full responsibility for managing the 180-acre farm which he is now purchasing. At the present time he is buying the machinery from his father and preparing to expand the dairy operation to 60 milk cows. After his year in office, Glenn plans to continue his education at nearby Penn State Center. He is pursuing a two-year course in agri-business for the purpose of improving his farm management skills.

In FFA Glenn served as chapter, county and state president, and as chapter secretary. While state officer, he represented the Pennsylvania Association at the Pennsylvania Poultry Federation, and worked on the executive committee at the state convention. He was chairman of



North Atlantic Vice President Glenn Weber.

the Grassland Chapter's leadership training, parent-son banquet, and program planning committees. He also participated in dairy and soil judging.

Along the way Glenn won the Star Greenhand and Star Chapter Farmer awards, a gold medal for his farm record book, and the Golden Hammer award from *Mechanics Illustrated*. His FFA advisor is Mr. Robert Herr.

In other high school activities this young man served as delegate to the Governor's Advisory Council, sang in the school chorus, and was on the honor roll. Glenn is very active in church as a teacher, belongs to a local cooperative, and plays softball on an all-star team.

A Farming

A Diversified Operation

THE national vice president for the Southern Region, Lowell Catlett, of Dalhart, Texas got started into farming with a bank loan and some Hampshire hogs. Each year Lowell reinvested his profits and continued to enlarge his herd. In addition, he raised 40 acres each of wheat, milo, and corn on land rented from his father. He also had a few cattle.

When his father had a heart attack last year the Catletts consolidated the ranch into one operation. Now Lowell supervises and works the 1,000-acre irrigated and dry land farm as his own. They grow 350 acres of milo and 250 acres of sugar beets on the irrigated land, and raise wheat and broom corn on the fallowed land. They also run a 75-head, Hereford cow-calf operation which they started when they sold the hogs.

In return for Lowell's work on the ranch his father pays for his education. Prior to becoming a national officer, Lowell attended Texas Technical College and took correspondence courses from West Texas State University. After this year he plans to continue his studies in agricultural business at a nearby university, and then become a full-time farmer.

Lowell's FFA activities include serving as chapter president, district president, area president and state vice president. As a state officer, he spoke before some 800 formal gatherings—assemblies, banquets, contests and other meetings—in Texas.

In the Dalhart Chapter where Mr. Ike Trimble is advisor

and vo-ag teacher, Lowell was chairman of the recreation and program awards committees. The young leader earned the local leadership and scholarship awards and participated in crops, land and livestock judging. He also wrote a first-



Lowell Catlett, vice president for the Southern Region.

place radio script, participated in public speaking, and was on the conducting and radio broadcasting teams.

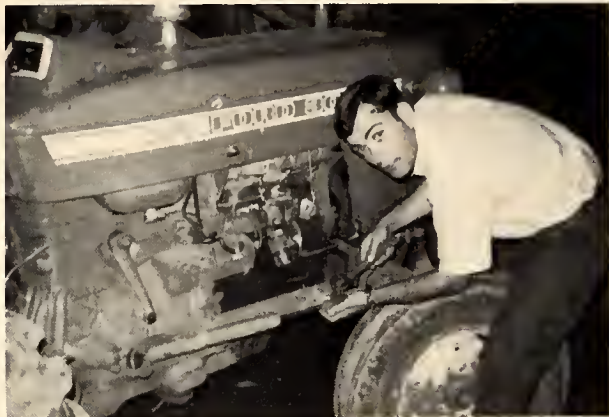
Lowell is active in church and still enjoys speech in a local club. In high school Lowell was chosen as the "most likely to succeed," "the most cooperative," and the "outstanding senior" in his class. He was selected as the best actor in both a three-act and a one-act play, won an award in debate, and also played football and basketball.

Growing An Orchard

THE farming program of Joe Martinez, national vice president of the Pacific Region, includes 12 acres of apricots and three acres of walnuts. This isn't many acres, but orchard farming requires many hours of labor and intensive management, and here's where Joe comes in.

Joe leases the land from retired farmers and makes all of the management decisions. He hires and supervises his own pruning, thinning, and picking crews. Besides this, he repairs and operates the orchard machinery and adds to his income by working for local farmers. During harvest

Vice President for the Pacific Region Joe Martinez.



time the young farmer drives trucks and fork lifts. Earlier in the growing season he operates a brush rake, a ridge buster, and the irrigation system.

In addition, Joe helps his father work their 75-acre farm near Winters, California. They raise almonds and peaches, as well as apricots and walnuts. Joe's management skill shows in the fact that he has saved 90 hours of labor per year by redesigning the irrigation system. Also, in previous years, his almond crop exceeded 1000 pounds per acre after cleaning.

Joe served as president, treasurer, and reporter for the Winters FFA, as area vice president, and as state president of the California Association. In his chapter he worked as chairman of the scholarship, finance, public relations, community service, and program of work committees. He also was a panel chairman and delegate to the state convention and a delegate to the national convention. The chapter advisor at Winters is Mr. Joseph Aguiar.

Other FFA activities in which Joe took part were livestock and soils judging and parliamentary procedure. He also won the Chapter Star Farmer and Crop Farmer awards. In high school the young leader was chairman of the local youth day, vice president of the student body, and sophomore and school reporter. He played varsity baseball and served as a delegate to the Governor's Conference on Youth.

Joe plans to return to California State Polytechnic College where he will continue to study fruit production and agriculture education. He is an honor student and has earned many college scholarships. The young orchard rancher is also very active in the crops club.

Foursome

Intensive Cropping

TOM Johnson, national vice president for the Central Region, and his father operate a 720-acre grain and hog farm near Ashland, Illinois. The Johnsons own the 210-acre farm and rent the remainder. They raise about 340 acres of corn, 310 acres of soybeans, 70 acres of wheat, and, until last year, farrowed 1,000 pigs per year. Because of a labor shortage, they now buy 40-pound feeders and market about 150 pigs in each lot. The Johnsons sell the corn not fed to the hogs and market all of the soybeans.

Tom's farming program includes 40 acres of corn and 40 acres of soybeans. While lowering fertilizer costs from \$20.15 to \$19.10 per acre, Tom raised his average yields to 146 bushels of corn and 47 bushels of soybeans per acre, not including a demonstration plot that produced 219.8 bushels of corn per acre. In addition, he owns one-third of the feeder pigs and maintains a herd of 11 registered Milking Shorthorns. Because of the extensive crop program, Tom says the cattle herd will not get any larger. All of the land is workable and too fertile to pasture, so Tom raises the cattle on dry lot areas.

The young leader served as sectional vice president, Illinois State Association president, and as secretary and president of the Ashland Chapter. Besides this, he was chairman of the scholarship, farm safety, and leadership committees. On the state level he worked as chairman of the budget committee and the Children's Barnyard at the state fair. He also represented the Illinois FFA at the American Institute of Cooperation and the National Safety Congress.

June-July, 1969

The active member participated in dairy, livestock, grain, soils, and meat judging contests. Tom also won the Chapter Star Farmer award, crop awards, and a scholastic award. His vo-ag instructor and FFA advisor is Mr. Michael Donnan.

In high school Tom also earned three letters in baseball and two in basketball. He worked as sports editor for the school year book, and as a representative, vice president, and president of the student council. He is also active in church groups and 4-H.

Upon completion of his term of office, Tom plans to return to Western Illinois University to continue a course in agriculture economics. Following graduation he will either teach vocational agriculture or farm with his father.

FFA Vice President, Tom Johnson, for the Central Region.



The Hazardous Occupations Order Affects You

IF you are 14 or 15 years old and work outside of your agriculture production or occupational experience program, you need to know how the hazardous occupation orders affect you. If you're over 16 and hire someone under the age of 16 years, you also should know how the order works and what the newly proposed amendment is.

The agricultural hazardous occupation orders of January 1, 1968, make it unlawful to employ any person under the age of 16 years in any of the listed agricultural occupations. However, the order does not apply to youth employed on a farm owned and/or

operated by parents or persons standing in for the parents. In addition, the order includes a blanket exemption for students working with their vocational education programs and other farm training and education programs—when accompanied with an approved written agreement.

Amendments

In June of the same year the agricultural hazardous occupation orders were amended to allow 14 and 15-year old youths to be employed to operate tractors and other farm machinery after completing a training program in the safe operation of such

equipment. This amendment permitted the county extension agent to award certificates upon successful completion of the course, and recognized the need for safety training for young farm laborers. This amendment was made at the request of the USDA's Federal Extension Service.

Since most of the enrollment in FFA and 4-H do not overlap, the need for broadening the opportunities under the agricultural occupations order was of concern to farmers and vocational educators. A currently proposed amendment, requested by the Division of Vocational and Technical Education in the U.S. Department of Health, Education, and Welfare, would allow the employment of 14 and 15-year old vo-ag students as farm machinery operators, after completion of safety training conducted and certified by a vocational agricultural instructor.

The objectives of the safe tractor and safe machinery operation training programs are to develop the skills and understanding needed to operate this equipment safely. The tractor course will require at least 15 hours of instruction of which two hours will be actual operating experience. In the machinery training program a student will receive at least two hours of actual experience within a minimum of 10 hours of instruction. Both courses will require the passing of both written and practical tests and a certificate signed by a certified vocational agriculture teacher.

Interpretations

The issuance of the hazardous occupation orders for agricultural jobs in no way affects the laws that apply to the employment of students in non-agricultural occupations. Each group has its own set of hazardous occupation orders. The key point is to be familiar with the definition of "agriculture."

"Agriculture" is defined to mean "farming in all its branches, including among other things, the cultivation and tillage of the soil, dairying, the production, cultivation, growing and har-

Hazardous Occupation Orders in AGRICULTURE Affecting the Employment of Persons Under Age 16*

1. Handling or applying anhydrous ammonia, organic arsenic herbicides, organic phosphate pesticides, halogenated hydrocarbon pesticides, or heavy-metal fungicides, including cleaning or decontaminating equipment used in application or mixing of such chemicals.
2. Handling or using a blasting agent. For the purpose of this subparagraph, the term "blasting agent" shall include explosives such as, but not limited to, dynamite, black powder, sensitized ammonium nitrate, blasting caps, and primer cord.
3. Serving as flagman for aircraft.
4. Working as (1) driver of a truck or automobile on a public road or highway or (2) driver of a bus.
5. Operating, driving, or riding on a tractor (track or wheel) over 20-belt horsepower, or attaching or detaching an implement or power-take-off unit to or from such tractor while the motor is running.
6. Operating or riding on a self-unloading bunk feeder wagon, a self-unloading bunk feeder trailer, a self-unloading forage box wagon, a self-unloading forage box trailer, a self-unloading auger wagon, or a self-unloading auger trailer.
7. Operating or riding on a dump

wagon, hoist wagon, fork lift, rotary tiller (except walking type), or power-driven earthmoving equipment or power-driven trenching equipment.

8. Operating or unclogging a power-driven combine, field baler, hay conditioner, corn picker, forage harvester, or vegetable harvester.

9. Operating feeding, or unclogging any of the following machines when powerdriven; stationary baler, thresher, huller, feed grinder, chopper, silo filler, or crop dryer.

10. Feeding materials into or unclogging a roughage blower or auger conveyor.

11. Operating a powerdriven post-hole digger or powerdriven digger.

12. Operating, adjusting, or cleaning a powerdriven saw.

13. Felling, bucking, skidding, loading, or unloading timber with a butt diameter of more than six inches.

14. Working from a ladder or scaffold over 20 feet high.

15. Working inside a gas-tight type forage enclosure, or inside a silo when a top unloading device is in operating position.

16. Working in a yard, pen, or stall occupied by a dairy bull, boar, or stud horse.

*Exemptions to all hazardous occupations in agriculture are available to vocational agriculture student learners.

vesting of any agricultural or horticultural commodities . . . , the raising of livestock, bees, fur bearing animals, or poultry, and any practices (including any forestry or lumbering operations) performed by a farmer or on a farm as an incident to or in conjunction with such farming operations, including preparation for market, delivery to storage, or to market or to carriers for transportation to market."

The definition obviously does *not* include, for example: feed, grain, seed, and farm supply businesses; grain elevators; farm equipment dealerships; farm equipment repair shops; fertilizer and farm chemical dealers or other similar kinds of businesses. Look for the article concerning these hazardous occupations for off-farm agriculture in the next issue.

Exceptions and Exemptions

The vocational agriculture student, who is developing his supervised farming program on the home farm, is in no way affected by the hazardous occupation order. He is free to participate in any of the hazardous occupations involved in conducting his own supervised farming program. He can also work for his parent, or the person standing in place of his parent, on the home farm if it is owned or operated by this individual.

The student who is placed on a farm, other than his own, for supervised occupational experience can be exempt from the order. He may participate in any or all of the hazardous occupations if the following conditions are met:

1. The student is enrolled in a bona-fide vocational agriculture program under a recognized state or local edu-

cational authority or in a substantially similar program in a private school.

2. The student is employed under a written agreement which provides that:

(a) Work in the hazardous occupations shall be incidental to the training.

(b) Work in the hazardous occupations is intermittent, for short periods of time and under the supervision of a qualified and experienced person.

(c) Safety instruction has been given by the school and will be correlated by the employer with on-the-job training.

(d) A training outline showing progressive work processes to be performed on the job has been prepared.

(e) The agreement contains the name of the student, is signed by the employer and a person authorized to represent the school and a copy is filed with the employer and the school.

These exemptions for student learners apply to all 16 of the hazardous occupations listed. The exemption privileges for student learners are for youth under the age of 16. However, the application of these exemptions must not be contrary to state or local law.



"Oh, it is gonna' rain—no mow, no mow..."

June-July, 1969



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SPORTRAIT

Stan Allen

DENNIS Dale McLain, a good professional organist, has played some sweet music on the pitcher's mound for the Detroit Tigers. Denny's pitching last year earned him the honor of being the first pitcher in major league history to simultaneously win the Most Valuable Player Award and the Cy Young Trophy for pitching.

McLain, who is 5 foot, 11 inches tall and weighs 185 pounds, has been primarily a fastballing power pitcher since his early days in the Markham, Illinois little leagues. He was an all-around athlete at Chicago's Mt. Carmel High School where he starred in baseball, football, and basketball. Baseball was his best sport as he hurled a sensational record of 38 wins against 7 losses. The Chicago White Sox signed him to a contract right after he graduated in 1962.

McLain's first stop in pro-ball was at Harlan, Kentucky, in the Appalachian League, where he got off to a fine start by pitching a no-hitter in his first game. He was soon moved up to the Clinton, Iowa team and had an over-all record of five wins and eight losses that year.

Detroit purchased Denny from Chicago in the spring of 1963, and farmed him to their Duluth and Knoxville teams. He continued to improve, and after winning 18 games against only six losses, the Tigers called him to Detroit for a look. He got his first major league start as a 19 year old, and fanned eight batters, hit a homer, and beat Chicago 4-3. At the start of the 1964 season, Denny was farmed out to Syracuse for more experience. But when he won three games and lost only one in eight appearances, he was called back to Detroit to stay. He worked in 19 games, mostly in relief, won only four, and had five losses, but fanned 70 hitters.

Denny had always depended on his fast ball, and gotten good results, but Detroit manager, Chuck Dressen, wanted him to add a curve to his pitches. Besides a curve, he now throws a good slider and a changeup. He has the ability to throw all of his pitches overhand or sidearm which keeps the hitters off balance and makes him very hard to hit.

McLain worked his way into the Detroit starting staff in 1965 and pitched in 33 games. He was the big winner for the Tigers that year with 16 wins against six losses and had a fine 2.62 earned run average. His 192 strike-outs placed him third in the league and he completed 13 of his games, the A.L.'s fourth highest mark that year. From June 12, to July 25, he won eight games in a row and he set a major league record on June 16 by fanning the first seven batters he faced as a relief pitcher.

He was sharper than ever at the start of the 1966 season as he had hurled 13 wins against only four losses at the All-Star Game break in mid-season. McLain was named to the All-Star Team and he pitched three perfect innings. He finished the season with 20 wins, 14 losses, a 3.92 ERA, and fanned 192 hitters. Denny was on his way to another 20-game season in 1967 when he dislocated two toes. He had a 16-16 record at the time and pitched only one more game. He won that and ended with 17 wins in 1967.

1968 was Denny McLain's year as he wrote his name into the record books for all times. He pitched 336 innings in 40 games, going the full route in 28 of those, and won an amazing 31 games with only six losses. He was the first major league player to win that many games in 37 years. Six of his wins were shutouts, while he fanned



Denny McLain, Detroit pitcher.

280 hitters, and a fine 1.96 ERA, and walked only 63 hitters. He even started a triple play against the Baltimore Orioles in September.

Denny was named to the All-Star Team for the second straight year and held the National League Hitters hitless in his two inning stint. McLain was the first pitcher in either league to be a unanimous Most Valuable Player selection. Only five other major leaguers have that honor—Hank Greenburg, Al Rosen, Mickey Mantle, Frank Robinson, and Orlando Cepeda—all pretty good company.

The 1968 World Series found McLain being matched against the St. Louis Cardinals' great Bob Gibson in a rare pitcher's duel. Denny came up with an inflamed muscle in his pitching shoulder, and gave Gibson the edge in their first two games by not being able to throw overhanded. McLain took cortisone shots to reduce the pain, and came back to win the sixth game, pitching all nine innings while giving up only three singles.

Denny, a 25-year-old veteran of six seasons, already has 90 wins to his credit in pitching 1176 innings of 171 games. He has fanned 917 hitters and has a good 3.11 career ERA. Dennis McLain, with all the tools of his trade, has the time to join the ranks of baseball's winningest pitchers.



... "He's a triple threat man, money, car, and a swimming pool."

Battery Care Pays

Use these maintenance tips and your tractor will give you a head start in the morning and save you operating costs all day.

By *Melvin Long*

A WELL-CHARGED, strong battery is a big factor in obtaining dependable, efficient performance from your tractor, truck, or car. In addition to the usual, obvious results, a weak battery can actually increase fuel consumption.

Consider the usual, frustrating starting process when the battery is weak. The engine turns over, but it doesn't fire. You pump the gas, or re-adjust the choke, and try again. If it still doesn't start, the carburetor soon floods and runs over. Then you must wait for the gas to drain away, diluting the oil in the process. Eventually, if you're lucky, you get the engine started, but at a much higher cost in gasoline than if it "caught" the first time.

It may not be difficult to keep a tractor engine running after you finally get it started, but it's often a different story with your truck or car.

There's the chance that the engine will "die" in traffic, with the resulting inconvenience, embarrassment, and often actual danger. So, whenever you are held up by a traffic light, there's a temptation to "race" the engine to prevent stalling. Often there's an attempt to justify this by the fact that the generator will supply more electrical energy to the battery. In reality however, this is a very inefficient and expensive method of battery charging.

With a weak battery, there's also the fear that the engine won't start again if you shut it off. So, if you make any stops along the way there's a tendency to leave the engine idling even if you stop for some time. Again, needless gasoline is wasted.

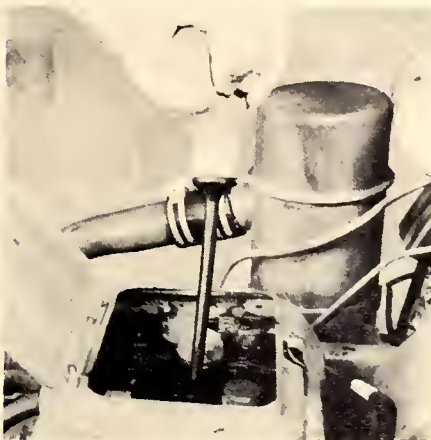
When you're faced with this situation, get a fast charge at the first opportunity. If there's any life left in the battery, this charging process will usual-

ly restore it to normal operation, at least temporarily. However, the permanent solution of your battery troubles lies in regular checking and maintenance. A few minutes attention at regular intervals will pay good dividends in battery life.

Liquid level. One of the most important points is keeping the electrolyte—a mixture of water and acid—at the proper level. The charging process evaporates the water but not the acid. Thus, more water must be added at intervals to maintain the correct level.

The level should be checked regularly—about once a week. Since the water evaporates more rapidly in hot weather, more frequent checking is a good idea during summer operation.

Most batteries have some sort of marker to indicate the correct liquid level. Do not fill above this mark. Otherwise, the solution may overflow



when the battery is charging, and some of the acid will be lost. Nevertheless, unless some of the acid is lost by over-

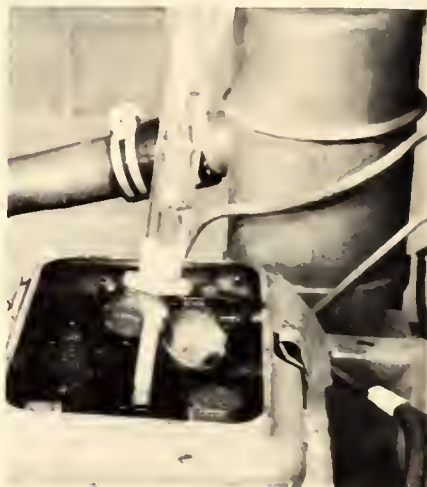
filling or spilling, it is not necessary to add acid.

What kind of water? Distilled water is best for use in batteries. This can usually be purchased from a battery shop or at the local grocery. Next best is clean, "soft" water, that is without dissolved minerals. The defrost water from the family refrigerator or freezer is ideal, if stored in glass or pottery containers.

You can also collect rain water in pottery crocks, if they are placed so that dirt doesn't splash in during collection. Clear cistern or "softened" water is next in preference. Least desirable is ordinary well water, but this is far better than no water at all.

Booster charging. The battery operates under a double handicap in extremely cold weather. At 0 degrees F. it has only 40 percent of the cranking capacity that it has at 70 degrees F. Yet, often twice as much power is required to "turn over" the cold, stiff engine. So it's important to keep the battery fully charged in cold weather.

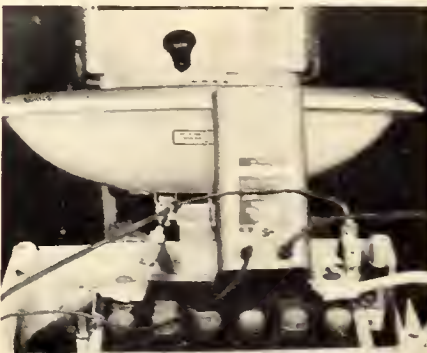
The amount of charge can be checked easily with an inexpensive hydrometer—available at most auto supply stores. The hydrometer, in effect, mea-



sures the proportion of acid and water in each cell, but reads directly in terms of the amount of charge.

A "trickle-charger" that operates from 110 volt AC provides a convenient method of keeping the battery charged.

(Continued on Next Page)



Battery Care Pays

ient means for keeping a battery fully charged, if the vehicle operating conditions do not permit the generator to do so. These chargers are plugged into an electrical outlet, and two small wires are clamped to the battery terminals. They charge rather slowly, so they must be left on for some time—usually overnight.

If your battery frequently needs recharging, or if you must add excessive amounts of water, better have the generator and regular performance checked.

Connections. To carry the large

amount of current required for starting, the cables must make good contact with the battery terminal posts. If your battery has a lot of "fuzz" around the posts, you probably aren't getting the full benefit of the battery's capacity. For this, cleanliness of the terminals is a primary requirement.

Rough service. Check the holddown arrangement. It should hold the battery firmly, but not injure it. If the battery isn't securely fastened, the case may be damaged when the vehicle is operated over rough ground.

Conclusion. The small time and effort involved in battery maintenance will pay you worth-while returns in savings, through longer battery life and more trouble-free operation. The extra peace of mind is just an added bonus.

Free for You

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81—Mineral Facts—This new edition can supply you with key pointers on up-to-date mineral nutrition for healthier livestock. The 13-page booklet provides detailed information about mineral deficiencies, sources of minerals, and mineral feeding programs. The booklet will also fit into a looseleaf herd binder. (Darling & Company)

82—Landscape Beauty Depends On People—This booklet emphasizes the importance of entrances, front and back yards, and the use of trees and shrubs when landscaping a home. The booklet includes 12 pages of full-color photographs and art work which will provide you with many ideas for landscaping your home. (International Harvester)

83—Ride a Quarter Horse—Besides explaining the history of the quarter horse and the development of the breed association, it tells about horse shows and the many competitive events. The booklet also contains many descriptive photos and illustrations. In addition, a thorough description of the conformation standards of the quarter horse and the youth activity program are included. (American Quarter Horse Association)

84—Holstein Sires 1968/69—This 44-page booklet contains photographs and records of 75 outstanding production sires now available as a result of genetic testing. The records include daughter-herdmate comparisons, a daughter appraisal, and a complete two generation pedigree on each Holstein sire. Photographs of a few outstanding daughters are also presented. (American Breeders Service, Inc.)

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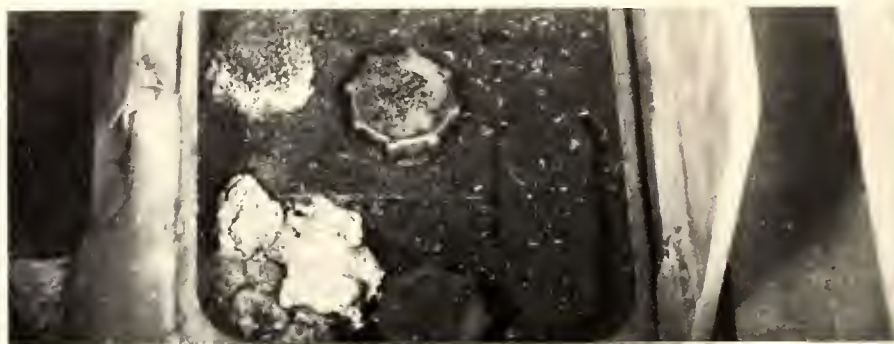
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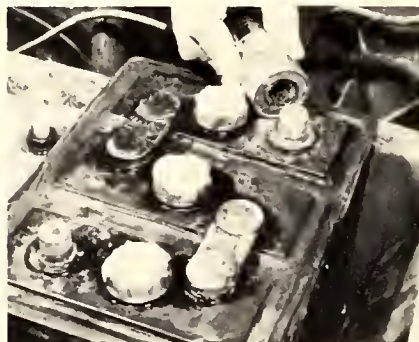
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August 31, 1969



Cleaning A Battery



1. Remove the cable clamps and clean them and the posts with a wire brush.



3. Buff the posts and clamps with steel wool before reinstalling the cables.

2. Wash the battery with a soft brush and a solution of baking soda and water. Rinse off with clear water and dry.



4. To prevent further corrosion, coat the battery posts and clamps lightly with vaseline or ordinary gasket shellac.





SEASON'S GREETINGS

Time now for chapters to place their orders for 1970 Official FFA Calendars to distribute during the 1969 Holiday season. (Don't be tricked into thinking that's a long way off.)

How can your chapter participate? There are three ways FFA chapters can participate in this public relations program.

Chapters who get a business firm to sponsor the calendar in the interest of the FFA chapter use Plan A. Chapters who order some calendars with the chapter's name on them or with appreciation for your support messages use Plan B. Individual members or chapters who want just a few calendars use Plan C.

There are three styles of FFA Calendars—a tent-style desk calendar, a large poster style, 13" x 21", and a home and office style with 12 color pictures about FFA.

The title of the 1970 FFA Calendar illustration (pictured above) is "Experience In Learning".

It is nearly impossible to list or even recognize the many learning situations in the world that surrounds us.

For the FFA members in this scene, the learning opportunities are many. Hidden behind the fun and excitement of this ball game are lessons in sportsmanship, teamwork, and competition.

Each year thousands of FFA members get a chance to spend some time in the comradeship of fellow members at camps, conferences or centers. They always learn. These situations are specifically designed to insure that the participant will face a variety of experiences in learning.

The old adage about "all work and no play" has some relevance here. Emphasis upon agriculture is typical in most FFA get-togethers. Members of the FFA recognize their role as youth leaders and future leaders of American agriculture. They hold a vital interest in all of

agriculture today, and look forward to its exciting career opportunities.

The relationship of FFA members with adult advisors and parents is noteworthy, however. An advisor can be a part of the fun even if he calls you out at home plate.

Who can measure the learning experiences facing a young man when he has responsibility for organizing a discussion group; or putting up the American flag at sunrise and leading the pledge to the flag; or serving meals and cleaning the table; or taking care of himself, his possessions and his appearance.

Sure, there's bound to be fun and frolic when young people assemble. Excitements only youth can know. But, there will be learning, too. Experience itself is a good teacher.

For more information about how your chapter can use the FFA Calendar, contact *The National FUTURE FARMER*, P. O. Box 15130, Alexandria, Virginia 22309.

Summertime Bass

To catch bass in the summer takes "reel" skill and patience. Here's how!

By Russell Tinsley

FARM pond bass do not fast in the summertime. It just seems that way.

Agreed, bass *are* difficult to catch in the hot summer months. But the task isn't impossible. I've enjoyed some of my best farm pond bass catches in July and August.

Mostly it is a matter of exposure. Too many fishermen simply give up and quit fishing in the summer. It is impossible to take bass without first putting a bait in the water. I've never seen a bass yet that went into a tackle box after an artificial bait.

To understand why summer fishing is difficult we must first analyze the problem. Fish are like humans; they become inactive in warm weather. By moving around less they burn less en-

ergy and consequently their metabolism requires less food.

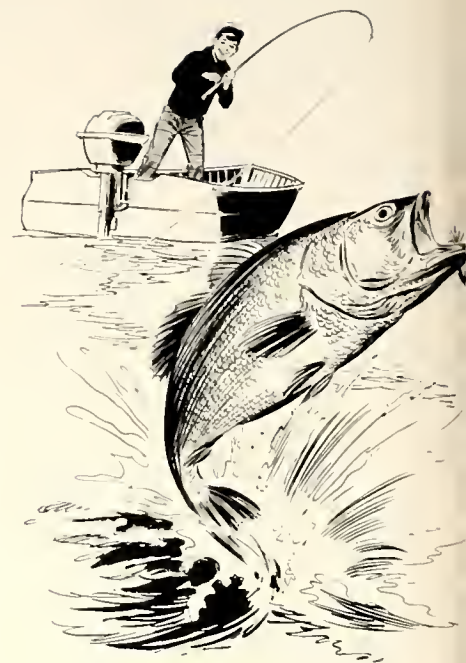
Consider your own behavior. In July and August you don't mind getting out in early morning or late afternoon, when the temperature is more agreeable; but in mid-day you'd rather find a cool spot and take things easy. A bass follows the same pattern. You're likely to find it feeding early and late, becoming indolent during the hot hours of the day. Contrary to what you have heard, bass *do* feed in the summer. They only eat less.

A hungry bass is vulnerable. This is why it is easier caught in spring and fall, when it is prowling about after food. Yet every bass you dupe into hitting your bait in the summer is a personal challenge. It is a real test of skill and tenacity to take bass in July and August.

One problem of farm pond fishing in the summertime is low water. It would seem that as the pond shrinks in size, the fish would be more concentrated and thus easier to catch. But usually it doesn't work out that way. A low pond tends to get stagnant and the bass are even less inclined to bite. A pond that is full or near full has the most active bass.

Under most circumstances the summertime angler can get by with just two styles of artificial lures, one that operates on the surface and another that is fished near or on the bottom. Bass tend to be isolated in these two regions.

Early and late in the day, just at daybreak and again at sundown, the bass are feeding in the shoreline shallows. While they still forage on a small bait-fish like minnows and sunfish, a bulk of their diet is composed of insects like grasshoppers and bugs, which are most profuse in warm weather. This is why early and late in the day, bass are susceptible to topwater lures. The smaller-sized plugs seem to work



best, and they should be fished very, very slowly.

Vegetation is a problem in many farm ponds. Weeds and moss are a nuisance in the summer. This makes fishing very difficult.

A pork chunk on a weedless hook is good under such conditions. So is a weedless spoon trailing a strip of pork rind. Hold your rod tip high and sort of run the bait along the surface. Reel just fast enough to keep the bait from sinking and fouling in the vegetation. The slower you can manipulate it, the better.

In mid-day the bass will drift back into the deep depths, seeking cooler water. Sometime take a thermometer and check the water in the pond or ponds you fish. Locate the deeper holes where the temperature is the coolest. Here is where you'll likely catch bass during the hot hours of the day.

On larger ponds you'll probably have to use a small boat or an innertube float to reach these deeper holes. Here bass will be hugging the bottom and won't be inclined to move even a few feet to catch a bait. You must go down where they are and fish slowly.

Leadhead jigs and plastic worms are two of the best baits for this kind of fishing. Deep-running plugs work at times, but often you must reel these baits fairly briskly in order to get them near the bottom. With a jig or plastic worm you can inch it along, at a speed

(Continued on Page 32)

Here the author displays a couple of bass which he caught on plastic worms.





a succession of goals...

By Charles J. Hanlon

YOUNG men who play football know the value of having a succession of goals. They want to win the game, of course. But, they know that the process of winning the game involves many small goals. To win the game requires scoring. Scoring means crossing the goal line.

A touchdown may sometimes result from a single play on first down, but most often the immediate goal is to get a first down. Pass or run for ten yards, get a first down, keep possession of the ball. And, in the process the team and players develop confidence by moving the ball. When the first down has been made, the linesmen will move the chains downfield. Right there before the eyes is visible evidence of the accomplishment. And the cheers of the crowd add an exclamation mark. Out of the huddle they come, rarin' to go.

Sports naturally set up a succession of goals. That's the whole thing about games—the goals. Winning is nothing more or less than crossing those goals—one after another.

Everyone needs a goal to keep him going. A goal for today, one for this month, another for next year. Each goal must be something a fellow can get hold

of. Impossible goals are not goals—just notions. When one masters the art of setting up a succession of goals, life goes cracking right along. Things get done, accomplishments accumulate, and new doors open.

To be useful, a goal must have three qualities:

1. **It must invite action.** It must be the sort of thing that generates the desire to get up and get going. It must fill the mind with impatience for the time of action.

2. **It must be reasonably attainable.** It should not be so far in the future that interest may wane in the long, drawn-out process. It also must be within the realm of possibility.

3. **It must offer some real reward.** When you have reached the goal, you want to stand up and be counted. You want a banner, a pin, a trophy, a pat on the back, a word of congratulations, your name in the local paper—maybe even a buck or two.

When you have set up and reached the first goal, won the first contest, you're ready for the next one—stronger than ever.

Consciously or unconsciously, the Future Farmers of America programs

have copied this theory of a succession of goals. Take the Star Greenhand award, for example. In the very first season of FFA participation, some one member in the chapter will come up a winner—but every member will have had a crack at it. At the annual banquet, the winner will be called to stand up and receive his plaque. Thus, the Star Greenhand award has all three of the qualities a goal must have—participation, attainability, and reward.

Though the awards program may vary from chapter to chapter and state to state, FFA avoids an "all or nothing at all" situation. Besides the Star awards, there are proficiency awards for dairy, beef, crops, shop skills, public speaking, parliamentary procedures, soil judging, livestock judging, and others. After the Greenhand years, there are opportunities to serve as an officer of chapter, district, state and national. Each FFA member should acquaint himself with the details of his chapter's awards program, select something as a target, and strive for it.

Remember, though, that even if you have set up a goal, worked with all your might to get there, and then got

(Continued on Next Page)

a succession of goals ...

nosed out—or even whitewashed—you have still learned something. You have learned an indispensable lesson in the mechanics of living, namely, you can't win 'em all.

Nobody hits every target every time. Nobody bats a thousand. But, obviously, that does not mean we have no winners and that everybody always loses. The difference between winners and losers is that the winners take the loss in stride and look to the next contest or goal with the expectation of winning.

Of course, winning involves more than merely setting up a goal and giving yourself a pep talk. It takes a certain amount of foresight, some patience and probably a good deal of effort.

About three years ago a certain FFA member was in the contest for a District Star Farmer award. He had a fine project and a good record of accomplishment in his chapter. However, the day before the judges came to inspect his enterprise, it happened to be a fine, warm summer day—just right for swimming. So, instead of making every possible last minute effort to prepare his project and himself for the inspection, he went swimming.

When all the candidates for the award had been visited and the judges tallied their score, this young man found he had come in second—he had lost by the barest of margins. Who knows, maybe a little more work and a postponement of the swimming excursion could have closed the gap and made a winner out of a loser.

The boy didn't make the same mistake twice, however. He came back next year, better prepared and won.

Another thing, don't be an ungracious loser. A grudge built up because of a loss gets to be a heavy load indeed. No man or youth, even half-wise, would carry one any farther than it takes to throw it away.

So, set up your goals like a row of hurdles stretching out along the track ahead of you. Get a good start, keep going, and leap as high as you can to clear each one. You may not clear some of the hurdles as smoothly as you would wish. You might even stumble now and then. But, get up and try again, and success will eventually come.

The previously-mentioned member failed in his attempt to win the Star Greenhand Award. None of the State Proficiency Awards came his way. A loser? Hardly. He served as chapter secretary, chapter and district president, state vice-president—and now he is your National President—Jeff Hanlon.

THE old adage that "it's on-the-job experience, not formal education that teaches a boy to farm" is becoming more untrue with each passing year. Today, schooling and successful farming go hand in hand. According to the February 1969, issue of *The Farm Index* by the USDA, every year of additional education is associated with a higher earning capacity. Of course, this does not mean that higher education is paired directly with higher earnings, but the association is striking. Evidence to this fact is offered by the following comparison of farm operators sale's and educations at the time of the last census.

Of the 2.2 million farm operators studied, roughly 130,000 had completed fewer than five years of elementary school. Nearly two-thirds of this group had farm-product sales of less than \$5,000 in 1964. Virtually none sold \$20,000 or more.

Their counterparts with five to eight years of elementary education were in a somewhat better position. Only two-fifths of this group, which totaled 890,000, sold less than \$5,000 worth of farm products and about a tenth sold over \$20,000.

Some 930,000 farm operators went as far as high school, though 370,000 of these didn't finish all four years. Even without a diploma, though, their sales positions were noticeably better

Farmers That Learn More, Earn More

than those of farmers with only elementary educations.

Of the group with one to three years of high school, only a third had sales of less than \$5,000. Eighteen percent sold \$20,000 or more.

The 560,000 operators who earned high school diplomas improved their sales positions even more. Fewer than a fourth were in the under-\$5,000 group, while 27 percent had sales of \$20,000 or more.

College attendance was no guarantee to success. About a fourth of the 220,000 operators that had college backgrounds sold less than \$5,000 worth of farm products. This was about the same proportions as for operators with high school diplomas.

Still, men that attended college reaped the biggest rewards of all. About one third of the college men sold over \$20,000 of farm products—a significantly higher percentage than any other educational background.

Summertime Bass

(Continued from Page 30)

more receptive to the bass' inactive mood.

Natural baits sometime produce a catch when artificials will not. A large grasshopper "free fished" without a sinker often works. Hook the grasshopper in the collar just behind the head and allow it to kick naturally on the surface.

In mid-day a large, live minnow fished the same way is also productive at times. Run the hook through the minnow's lips or just behind the dorsal fin, where the bait fish will remain lively. Just the weight of the hook will slowly carry the minnow down. A sinker would tend to bury the bait in silt and vegetation found along the bottom.

Any bass caught in the summertime should be cleaned immediately and placed on ice. A bass that's put on a stringer sometimes succumbs quickly in the heat. If you must stake one out, put it in deep water, rather than in the shallows. This will keep it alive longer.

If you don't want to pay the price of day-long fishing in the summer, the best time for catching bass is during

the magic period between daybreak and sun-up. The shallows have cooled somewhat during the night. Insects are more active; sunfish and minnows have moved into the shallows. Predatory bass follow. The fisherman, if he's wise, follows, too.

A summer catch like this is a real feat.



The National FUTURE FARMER



FFA Chapter president,
that's what I want to be.

Becoming A Leader

By Dennis W. Torrence

MANY energetic, ambitious, young people across America are set on becoming a leader. However, they have many, many questions. What to do? How to act? What to say? What does it take? And, can I do it? —just to name a few.

In Virginia the Hub Federation of FFA Chapters in Amherst, Appomattox, and Campbell counties decided to provide some of the answers by conducting a leadership training school. The school was designed to build confidence, and head prospective and present chapter officers in the right direction toward becoming more effective leaders. The main objectives of the school were:

1. To give participants practical experience in performing the duties of his office or the office of his interest.
2. To give practical training in table manners and social grace.
3. To discuss and demonstrate topics for conducting an effective chapter program.

Following the opening ceremony and leadership briefing, the FFA members were divided into groups. Reporters, for example, discussed methods and techniques of writing new articles and using and taking pictures. They also prepared a reporters schedule of events and ended the session by writing an article on the leadership school for their local newspaper.

Sentinels practiced how to welcome visitors, shaking hands, and seating people. In addition, they set up rooms for various FFA meetings and arranged the paraphernalia. The other officers exchanged copies of chapter programs, discussed program topics, and practiced making the necessary arrangements for FFA events. They also practiced introducing programs and speakers.

Even the dinner hour was utilized

as a local restaurant served a meal similar to a parent and son banquet. The problem of which fork to use for what dish, how to cut meat and butter bread properly, how to squeeze a lemon in tea, where to lay the knife or fork after using it, plus many more rules of etiquette were discussed. After dinner the FFA members examined special topics through demonstration and conversation. This included an enthusiastic discussion of "The Eight Essentials of a Good FFA Chapter."

How successful was the school? Only time will tell as the young FFA members move into positions of leadership. According to an evaluation by questionnaire, over 90 percent of the participants felt it "most helpful". One ambitious Greenhand summed it up this way, "I knew where I wanted to go all along. Now I have a better idea of what it takes to get there and how to go about it."

What in the world do you do with all of these knives, forks, and spoons?



Does your horse have these symptoms?

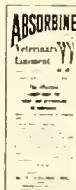
1. Stiff-gaited walk, or refusal to stand on all four legs are general symptoms of lameness. Check horse over carefully.

2. Swelling and heat on front of foreleg from knee to ankle. It's called "bucked shins."

3. Soft, painless swelling around the fetlock is called "windgall" or "windpuff."

4. Swollen tendons — swelling gives a "bowed" look from knee to ankle, so it's called "bowed tendon."

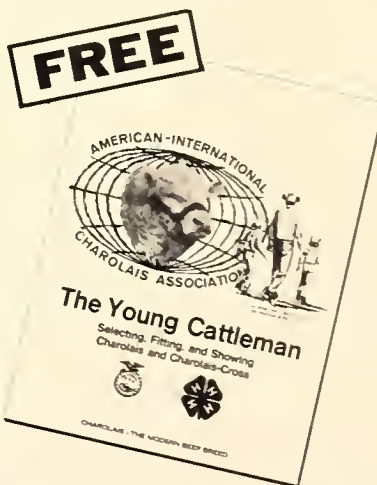
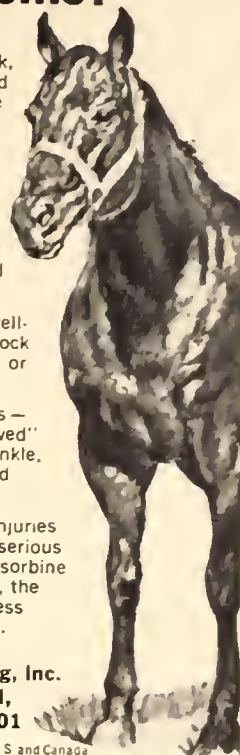
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Breeding Disease-Resistant Livestock



BREEDERS of domestic animals have made remarkable progress in getting more eggs per hen, more milk per cow, and faster growth in broilers, beef cattle, and hogs. Still, the high costs of drugs, vaccines, and antibiotics "eat away" at your profits—and high productivity is only attainable when animals are relatively free of disease.

In every flock or herd "hit" with disease, one can find some animals that are affected very little or not at all. If some animals can resist disease, why not multiply their kind and make the whole flock or herd resistant?

Some of the reasons why animal breeders and veterinarians have almost ignored the possibility of breeding disease-resistant animals are presented here. A few ideas that may help to counteract the most common objections to genetic control of disease are also suggested. This material originated from an article written by Dr. F. B. Hutt, geneticist at Cornell University, in the 1968 third quarter edition of the *Agricultural Science Review*.

In contrast to the lack of developing disease-resistant animals, crop varieties resistant to wilt, blight, leaf spot, rust, or insects are constantly being reported in farm magazines. Plant breeders and plant pathologists have developed grains, grasses, vegetables, and fruits that combine desirable market qualities and genetic resistance to disease. The result of these accomplishments has increased the world's food supply and advanced the livelihood of many farmers.

Selecting Animals. Wild animals stricken by diseases utilize the survival of the fittest as a mechanism for defense against diseases. This method of disease control is usually denied to domestic animals even though, in the long run, it may prove to be more effective than any other.

Even in the short span of a human lifetime, we have seen houseflies become resistant to DDT. In Australia, rabbits, once so susceptible to a tumor disease, are demonstrating that they can breed resistant strains. In Africa, hoof animals of all sizes have developed a resistance to a single cell parasite.

No geneticist would recommend breeding or selecting for resistance to any disease that can be controlled by other means at a reasonable cost. However, some diseases can not be economically restrained by rigid sanitation or veterinary methods.

For example, isolation of chickens will control Marek's disease and leucosis, both forms of fowl paralysis, only to the extent of the degree of isolation. Consequently, complete control is expensive and difficult to achieve. In the case of mastitis in cattle, effective control can be attained with antibiotics. At the same time, antibiotics are costly and a great concern to public health. In 1967-68, over 400,000 animals were slaughtered in Britain to control an outbreak of foot-and-mouth disease. Even though vaccines are made there and shipped abroad to other countries, eradication by slaughter is cheaper.

A good example of selection for resistance was literally forced on an animal scientist in Alberta, Canada. A herd of pigs was riddled with atrophic rhinitis, an inflammation of the nose which stops the development of the mucous membranes. Slaughter would have delayed his research for several years. So, it was decided to make the pigs live with the disease and select for the ability to resist rhinitis. The disease gradually disappeared, and Lacombe pigs, a newly developed breed, was released four years later. Reports from farmers now indicate that the breed still excels in resistance to rhinitis.

A somewhat similar history was responsible for the superior resistance of a strain of Leghorns to a respiratory disease at Cornell University. During its formative years in 1934 and 1935, the flock suffered heavy losses. They were not vaccinated or otherwise treated. By 1936, the disease had disappeared, and has not reoccurred in this strain even though other birds have been infected.

Genetic Problems. Most of the time

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Many farmers grow disease-resistant field crops, but how many raise animals that resist disease?

genetic resistance to a disease depends on many genes—not just one dominant or recessive. Thus, breeding is a slow process. Even progeny-testing, the most effective procedure, is difficult when sires and dams must be kept until their offspring are tested for resistance. Therefore, problems with larger animals are more serious than with chickens or pigs.

In addition, genetic resistance to one disease is usually independent of resistance to others. At Cornell, two strains of chickens were equally resistant to leucosis, but one was less resistant to blue-comb and the other more resistant to Newcastle disease. Another strain highly resistant to blue-comb was extremely susceptible to leucosis. Mice resistant to one disease-causing virus also showed independent resistance to two others. Hence, establishing a super-race of animal resistant to all diseases may be unlikely.

But all hope is not lost. Some chickens resistant to Newcastle disease also resist other respiratory diseases. Likewise, several tomatoes found resistant to certain diseases have been used in other parts of the world to adapt varieties resistant to different diseases.

The greatest difficulty arises in the identification of resistant animals. This can only happen when the stock is exposed to a disease. The idea of doing it purposely is in opposition to veterinarians—they control and eradicate disease—not let animals live with it. Stockmen also agree because they want profits—not a loss.

Some diseases, however, will not stay eradicated. Organisms controlled temporarily in single animals or even flocks and herds may return shortly after treatment.

Mastitis in cattle is a good example. Frequently the disease strikes without warning, too late for effective use of vaccines, drugs, and antibiotics. Disease-resistant animals can be readily identified. In pedigreed animals the

possibility of recognizing resistant families as well as resistant individuals also arises.

Disease Indicators. Sometimes a genetic variation in form or function of a trait can be found that is consistently associated with resistance to a specific disease. With such an indicator, disease-resistant animals can be bred without exposing them to disease. At first the possibility of finding indicators might appear remote. But, two of them have already been demonstrated and, a third awaits confirmation. These indicators are enough to suggest that more might be found.

The simplest kind of genetic indicator is one that can be seen. In Hereford cattle, a ring of pigment around the eye protects animals from developing carcinoma of the eye, or "cancer eye". The affliction occurs in areas of intense light and in animals more than 4 years old.

Fortunately, the indicator is visible when calves are 3 months old, making early selection possible. The immunity is related to the degree of pigmentation in the eyelids. Animals with a ring of pigment at least half-an-inch wide around the eye are practically immuned.

In chickens, genetic resistance to infection by pullorum, a diarrhea virus, is associated with superior control of body temperature. Efficient control causes chicks to develop and sustain fever when infected.

The body temperature of chickens rises from 102-103 degrees at hatching to the 105-107 degrees of an adult bird in ten days. However, the indicator for resistance can be measured in the first six days of a chick's life. By averaging three readings, one can determine chicks that raise temperatures quickly.

Early tests showed that susceptible quarters of cattle suffering from mas-

titis had more palmitic acid, a fatty acid, than resistant animals. However, the problem of breeding for resistance is that susceptibility increases with age, and is seldom evident in the first lactation.

Present research indicates that fatty acid composition can be detected in young 2-year-old heifers. The implication is that breeding for resistance to mastitis may become easier than selecting for high milk or fat production. Skin secretions from bulls also might show similar results.

Other Diseases. Nature made the Romney Marsh sheep relatively resistant to nematode worms and N'Dama cattle of West Africa resistant to single cell parasites. In South Africa, man bred the Bonsmara cattle to utilize the tick resistance of zebu cattle.

A procedure now being used against Marek's disease by large scale poultry breeders permits rapid breeding of disease-resistant stock. Deliberate inoculation of strains with strong dose of a virus reveals susceptible and resistant animals.

Another disease worthy of possible study might be foot-and-mouth disease. The United States, Canada, and Australia have not had an outbreak since 1872, but Britain has encountered six in the last 45 years. Since about 3 percent of the infected cattle die—more in swine and sheep—the possibility of perhaps 10 percent being affected very little or not at all remains.

Genetic resistance is not likely to make the use of drugs unnecessary, but, careful use of both kinds of control might retard the process of stronger drugs breeding ever-stronger diseases or parasites. So maybe someday, animal breeders in all countries will decide that the ability to produce offspring resistant to disease is a better asset for a herd sire than a pedigree with just illustrious names.

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Project chairmen Barry Weyant and Delmas Carson check on the apple butter.

PENNSYLVANIA—Members of the Chestnut Ridge Chapter boiled old fashion apple butter to sell and raise money for the FFA.

The "boiling" was so successful they decided to call it an annual affair. Barry Weyant headed up the planning committee.

The day before the boiling, some of the chapter members cut wood for the fires. The same evening, 23 mothers, fathers, sisters, and grandmothers came in and helped peel and slice about 25 bushels of apples. The apples were purchased locally.

At 5:30 am, on the big day, FFA members first started to get the cider boiling. Five big black iron kettles were used in the project and they were donated by friends of the chapter. It took all day to boil the apple butter.

Mr. Sherman Weyant seasoned the batch in the evening. Mothers and sons put the butter in jars. The project yielded 117 gallons, and made enough money to cover the expenses of the annual parent banquet. (*Ted Amick, Advisor*)

MINNESOTA—Want to find an economical place to stay at the National FFA Convention? The Wadena Chapter found it.

Five members made the 700-mile trip to the convention last year with Mr. Clarence Horsager, their advisor. Because of finances, the group decided they would have to find a place to camp. They had difficulty in getting any ideas or information about campsites before arriving in Kansas City.

So, they registered at the convention and then went hunting. They ended up camping at Lake Jocomo. They reported it was a beautiful camp with hot & cold water. It is located only 14 miles east of the FFA Convention headquarters.

Total costs for the three nights (Tuesday, Wednesday, and Thursday) was \$4.50.

THE FFA IN ACTION

On Wednesday evening the FFA members returned to camp after the evening session. One member found a litter of pups in his sleeping bag. It seems a stray dog found an ideal location. They contacted the nearby county sheriff. He couldn't get the dogs into the dog pound or animal hospital, so he took the dogs to the Park Ranger.

The Wadena Chapter received courteous and welcomed protection from the park manager, ranger, and police. They all kept a careful vigil on the camp activities. (*Steve Richter, Reporter*)

OHIO—What a power force to take the lead of the Warren FFA Chapter in Vincent. They have 115 FFA members in a school of 700.

Senior John Coffman is chapter president, senior class representative to the student council and varsity club president. Chapter Vice President Allen Clark, is also a senior class vice president, but serves as president of the student body. Steve Sprague is FFA treasurer and senior class president. All three have their State Farmer degree.

Other chapter members fill a variety of school leadership positions. Mike Wentz is junior class president; Marty Clark is sophomore class president; Rick Kahrig and Dan Anderson represent sophomore and freshmen on the Student Council; and Terry Coffman is freshman class vice president. (*Hugh Coffman & William Tachett, Advisor*)

MICHIGAN—Portland FFA Chapter stopped along an expressway to give a helping hand. On the return leg of a trip to the regional leadership contest, the chapter bus came upon an elderly man in an old car with a flat tire.

The FFA members convinced the bus driver to stop so they could change the tire. While some changed the tire, other members told the driver about the FFA.

Advisor Clark Bullen (also the bus driver) says it's not unusual for FFA members to want to stop and help. (*Jim Stump, Reporter*)

ILLINOIS—Community service is a big part of the Maroa Chapter program.

Six years ago, FFA members noticed the gradual loss of their city's beautiful shade trees through storms and disease. Also, a highway widening project took many trees along a path thru the city.

The chapter decided they would offer to purchase and plant trees for any

Power force at Warren High School are FFA members. Left, bottom Mike Wentz, John Coffman, Allen Clark, Steve Sprague. Top: Marty Clark, Dan Anderson, Terry Coffman, Rick Kahrig.



These FFA members made the effort and helped an elderly man change a flat.



TION

resident who would make a request for the tree, and agree to plant it on the boulevard area of their residence.

Since initiating their tree planting activity, the Maroa FFA has purchased and planted 300 shade and flowering trees on streets of their city. They planted 84 this past year.

Another big community service project promoted the FFA and agriculture. They set up animal display in a nearby shopping complex during the Easter weekend. They had an agreement with the center who provided tent, pens, cages, and paid the chapter \$250.00. The FFA provided animals and manned the display.

The members brought ewes and lambs, ponies, cows and calves, sow and litter, rabbits, ducks, and goats. An incubator was set up especially for the kiddies, to show eggs hatching. A peep show with a special arrangement of mirrors showed baby chicks in action.

The chapter considered this an excellent chance for publicity plus a chance to tell the 10,000 people who visited the exhibit about FFA and agriculture. (*Melvin Nichol, Advisor*)

Lots of supervisors helped with this chapter effort to beautify their city.



June-July, 1969

SOUTH DAKOTA—The Letcher Chapter is a busy one. President David Van Overschelde has worked out an extensive committee system that gets the work done. The program of activities has ten different committees. Each committee has specific duties to accomplish during the year. Any ideas or suggestions that members bring up at chapter meetings are referred to a committee for review.

Another goal of President Van Overschelde is to improve the procedure of the monthly business meeting so it runs smoothly.

This report of committees shows that the Letcher FFA is a busy chapter that works at being a good chapter.

Public Relations: Olen Ettswold is to get posts for the outside billboard. Leadership: The chairman is to get TV appearances for the four State Farmer applicants for FFA Week and also for the judging teams. Conduct of Meetings: John Clark ordered 200 boxes of Christmas cards. Earnings and Savings: Bob Steckel reported that we should get new signs to replace the old ones that signify that we have a new chapter. Supervised Farming: Rodney Clarembau reported that we have 25 acres of land for next year.

Dick Heinzman moved that we send the officers to the rural schools and the Letcher seventh and eighth grades to talk with them and give them an idea what FFA is about. After the meeting, we had basketball for recreation. (*Tim Stach, Reporter*)

IOWA—The New Hampton FFA Chapter sponsored a Farm-City potluck during National Farm-City Week.

An estimated 200 persons attended the event with local business and professional men and their wives as guests of area farmers. The farm family brought food for themselves and their guests. It was the first such event in the community and FFA paid all other costs.

The special program centered around speakers Steve Zumbach, state FFA president, and Mr. Dave Murphy, an agricultural public relations specialist from Des Moines. Both spoke about farm-city interdependence and strengthening relationships for the common goals of the two segments of the community.

FFA members at New Hampton planned the event and started the action. Committees appointed included program, food, decorations, facilities, and publicity. FFA placemats and napkins were used. Local press and radio stations, as well as farm organizations helped publicize the event.

The chapter was pleased with the acceptance of the event, including a follow-up newspaper editorial. (*Robert Bell, Advisor*)

NEW MEXICO—The Moriarty Chapter of Future Farmers of America held recently their annual Greenhand initiation ceremony. The following were awarded the degree of Greenhand: Billy Armstrong, Kenneth Armstrong, Lloyd Bradley, John Burson, Alton Bassett, Manuel Chavez, Pete Encinias, Bernie Encinias, Anthony Garcia, Larry Gonzales, Stanley Henson, Melvin Johnson, John Kelton, Mike McFall, David Neville, David Plant, Ronnie Pittman, Darwin Pachta, and Charles Sultermier.

As in every Greenhand initiation at Moriarty, the Greenhands compete in a baking contest. They can either bake a pie or cake. The winners of this contest were Stanley Henson for the best cake and Ronnie Pittman for the best pie. Stanley Henson made a German chocolate cake and Ronnie made a chocolate pie with the lettering of FFA on top of it. Justin Lesky, state FFA president, was present at the meeting and served as judge for the contest. (*Ray Price, Reporter*)

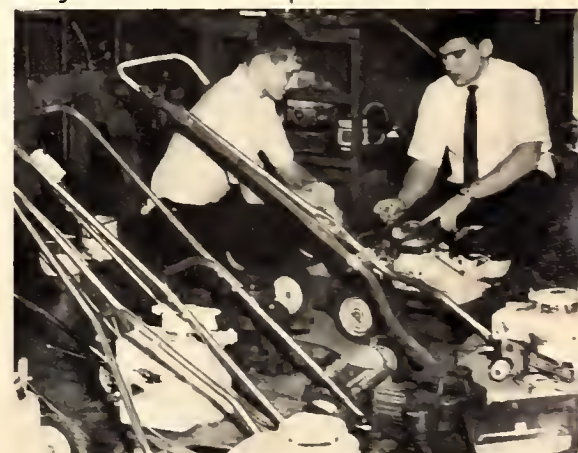
OHIO—Occupational work experience (OWE) students enrolled in agricultural shop course learned the basics of engine operation and repair.

The lessons started with a discussion of uses of small engines with agriculture and industry. The class was taught with slides, demonstrations, and a lecture to learn how to overhaul small engines. After the basics were out of the way, the class took on the real thing. They began taking repair and overhaul jobs for school employees, other students, and parents.

The charges were cost on all parts, plus \$2.00 labor. This developed into a public service lawnmower repair and reconditioning service. The plan will be conducted again next fall. All mowers were painted and completely reconditioned.

The project was coordinated between the vocational agriculture instructor and the OWE instructor. (*Al Green, Advisor*)

Instructor Green shows John Davis how the governor works on a power mower.



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FARM POND SAFETY

They Did Something About It

THE Triway FFA Chapter of Wooster, Ohio, got interested in farm pond safety when their county soil conservation agent told them about all the farm ponds being constructed in the community. Mr. Dush said he was concerned that many of these new ponds did not have provisions for safety when the pond is used for fishing, swimming, or skating.

So, it didn't take long for this energetic FFA chapter to see an opportunity to be of service to the community. FFA members contacted pond owners in the area and described the plan to install farm pond safety rescue stations. They stressed the importance of having safety materials available near the pond for emergencies, and details about how to construct a station and what it should contain.

The chapters in the county joined forces for the project and pooled their orders for the various items in the stations. Then they distributed them to pond owners who requested them. FFA members also helped with construction.

Safety and rescue materials are all attached to a pole erected near the ponds. (Usually an eight-foot 4 x 4). A 14-foot reach-pole is attached with clips. A tin can containing first aid materials is fastened to the pole. (A coffee can with plastic top is good. It should be marked to indicate first aid articles.) An innertube, 50-foot of nylon heave line, plastic whistle, and plastic ballast (usually plastic gallon



Ron Grosjean shows the rescue station near the swim area on his family farm.

Note that two rescue stations were put up since it is often used by children.



bottle) make up the rest of the list. The posts need to be painted. Also, a Red Cross instruction poster covered with plastic should be attached.

That's doing something about farm pond safety.



"It's the first tomato he ever raised—you have to eat it!"

The National **FUTURE FARMER**

Farming With Desire

Jean T. Joslin

CAN a 15-year-old boy manage a 125-acre farm with a herd of 60 cows and still attend high school every day? For Donald Pautz, a member of the Horicon, Wisconsin, FFA Chapter, the answer is "yes."

In October, 1967, doctors found that Mr. Harvey Pautz, Donald's father, had a defective heart valve. He was told that physical labor was out of the question until the valve could be repaired.

"I thought I would have to sell everything," Mr. Pautz says. "Don had helped around the farm after school, but I didn't think he could handle the whole thing." Mr. Pautz owns the farm and, with careful breeding and herd replacement, had built-up a herd of 65 registered Holsteins. He previously operated the farm with no hired help.

However, when asked what he thought of selling the stock, and possibly the farm, Don said, "No. I think I can take care of the cows and do the planting. I want to try."

Don's father says proudly, "I gave him the alarm clock that day and he's been getting up at five o'clock ever since."

Mr. Pautz sold five head of cattle, leaving a total of 60. Of these, 35 are milked every day, producing 1,600 pounds of milk, with an average of 550 pounds of butterfat.

Besides the milking, Don feeds the cows and cleans the barn every morning before school. Mrs. Pautz helps by washing the bulk tank and milking equipment, and two of Don's friends take turns helping Don with the farm work. After school Don is busy doing chores from 4:00 until 7:30 p.m. Then he tackles his homework.

Last June Mr. Pautz underwent open heart surgery. He is doing a little work

but is still not allowed to lift anything. He recently bought a mechanical feeder for the yard to make this chore easier.

Don, with the help of a neighbor, carried on "business as usual." They planted 17 acres of corn, 30 acres of oats, and 46 acres of hay. "Maybe some of the rows were a little crooked," says Don, "but we got it done. Anyway," he says with a grin, "you can plant more corn in a crooked row than a straight one."

Mr. Pautz was pleased with the harvest. "One hundred and forty bushels of corn per acre and 85 bushels of oats are as good as we've ever done," he says.

Last fall Don ran the FFA refreshment stand at home football games and sold rat bait to farmers in the area. He won the Star Greenhand Award as a sophomore.

This year as a junior Don received the Dodge County Holstein Breeders' Award for Livestock Recognition and recently, at the chapter banquet, won the FFA foundation dairy award. Don is a junior member of the Holstein Friesian Association and also a member of 4-H.

In spite of his full days spent running the farm, keeping records, and participating in FFA, Don manages to be an honor student in agriculture. When asked about his plans for the future, he says he wants to stay on the farm, and some day have one of his own. He would like to take some farm courses at the University of Wisconsin after his graduation from high school.

In spite of future plans, Don will have a hard time doing a finer job of farming than he has done for the past two years. By putting his own "heart" into the farm work while his father's heart rested, Don has brought the Pautz family through a crisis.

This photo was taken recently while Don and his father were doing chores.



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A new 85 hp Hydrostatic Rice Special combine has been introduced by Case. Features on the Model 960 include single lever control of speed and direction, a 13-foot header, 40-inch wide spike tooth cylinder, 7-inch grain elevator, 10-inch loading auger, and 231. x 25 flotation tires.

The new 50 foot high Ram-Jet frost fighter built by Farmhand, Inc., Hopkins, Minnesota, operates at a speed of 550 rpm. It produces up to 17 million B.T.U.'s and moves up to 60 million cubic feet of air per hour while protecting 20 to 40 acres depending on climate. The jets are powered by regular gasoline and have no moving parts.



Something New

A new Traveling Bunk Feeder, the "SCF-1400" by Van Dale, Long Lake, Minnesota, can supply a continuous shuttle of silage from any style unloader. It features interlocking, snap-together sections, sides that measure 14 inches at the top and 10 1/2 at the bottom, and a reversing motor.

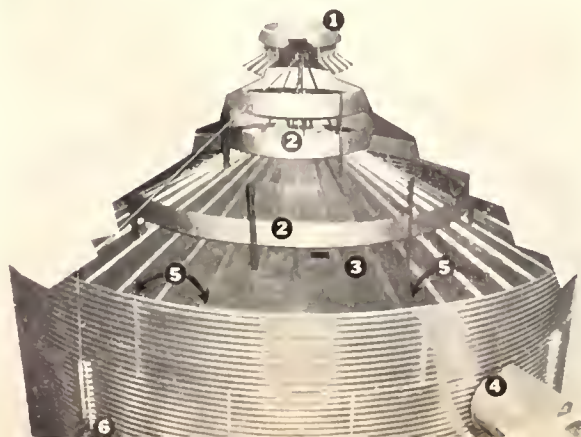


The new model K self-propelled Gleaner combine built by Allis-Chalmers has a six-cylinder, 250 cubic inch, gasoline engine developing 78 hp, new variable speed lower cleaning fan and cylinder control, center-line design, down-front cylinder, and quick detachable headers.

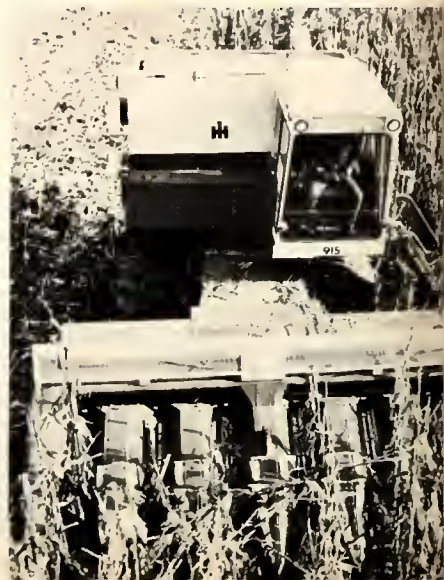


The new Model 1005 Stackliner by New Holland picks up, loads and transports 56 bales per load and can discharge them singly along a feed bunk or in an elevator. A new model 1010 can be equipped to pick up bales one or a stack at a time and discharge them either singly or in stacks.

International Harvester has announced that the new 915 Monitor-Control combine now has a low-profile, 30 degree angle, corn head available. The 915 features quick-attach header design, hydraulic unloader auger, hydrostatic all-speed drive, and (a 16 position) Monitor-Control console.



The Even Dry System, a new concept in grain drying, has been introduced by Stormor, Inc., Fremont, Nebraska. Wet grain falls through the hatch (1) while retainer rings (2) keep grain depth uniform on the subfloor (3) just above the fan and heat unit (4). A capacity of 1,200 to 1,600 bushels of wet grain can be dried overnight and dumped by reel and crank (6) through 37 doors (5) in the subfloor.





This champion team of dairy judges poses with their collegiate team coach on the left, Gerry Wagner. They took top honors at the International in Chicago. Team includes from the left, Leslie Ferreira, David Gomes, and Tim LaSalle.

This Is A Real Team

THE news release from Cal Poly starts out—"Three juniors who have judged dairy cattle together as a team since they were freshmen in high school won the Intercollegiate Dairy Cattle Judging competition at the International Livestock Show."

If you dig deeper, however, there is quite an FFA story. These three dairy majors at California State Polytechnic College are all graduates of Hanford High School and were members of the Hanford FFA Chapter. In 1966, this same trio won the National FFA Cattle Judging competition in Waterloo, Iowa.

This team-of-teams includes Leslie Ferreira, 21; David Gomes, 20, and Timothy LaSalle, 21. They began their dairy cattle judging career under the guidance of Emile LaSalle, then vocational agriculture instructor at Hanford Union High School and chapter advisor. He's also Timothy's father.

As members of the FFA, the "team" participated in more than 20 dairy cattle judging contests leading to their success in the state-wide contest in 1965, and the National FFA Contest in 1966.

They were also members of the chapter's parliamentary procedure team, and they comprised the cotton and citrus judging teams for their chapter.

All three served as chapter secretary.

LaSalle was chapter co-operative quiz competition winner. Gomes was public speaking winner.

This busy trio are all members of the agriculture student council at Cal Poly. LaSalle is vice-chairman and Ferreira is secretary. Gomes is currently editor of the dairy club yearbook.

These FFA members found a winning combination and made it work.



"My parents and I are old fashioned. They give the orders and I carry them out."

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HAVE YOU HEARD THIS ONE



Girl driver after a collision: "It was really my fault."

Gentlemanly teenage boy: "No, it was my fault. I could plainly see that you've just started driving, and I could easily have driven over into that field and avoided this."

Ken Roberts
Graceville, Minnesota

After his first day at school, Sammy announced, "I'm not going tomorrow." "And why not?" challenged his mother.

"Well," he replied, "I can't read, can't write, and they won't let you talk. So, what's the use?"

Gary Swearingen
Clarendon, Texas

At an FFA class reunion, the toastmaster asked a man at the head table, "Were any of your childhood ambitions ever realized?"

"Yes," said the man, "when my mother used to cut my hair, I always wished I'd be bald someday."

Margaret Kriley
Plainville, Kansas

"Can you keep a secret, Jan?"

"I can, but it's just my luck to tell things to other girls who can't."

C. Courson
Hickory Flat, Mississippi

First boy: "What's the best way to teach a girl to swim?"

Second boy: "That's an art. First, you put your arm around her waist. Then, you gently take her left hand ..."

First boy: "Hey, it's my sister."

Second boy: "Oh, then you just push her off the dock."

Edward Mount
Crosby, Minnesota

Sophomore: "You like girls, I gather?"

Junior: "I like girls anybody gathers!"

Ned McIntee
Mercer, Tennessee

Boss: "Jones, how long have you been working here?"

Jones: "Ever since I heard you coming down the hall!"

Byron Hielson
Appleton, Minnesota

Patient: "I knew I wasn't dead because I was thirsty and my feet were cold."

Doctor: "What does that prove?"

Patient: "If I'd have gone to heaven, I wouldn't be thirsty; and if I had gone the other way, my feet wouldn't have been cold."

Ronald Oxerdine
Pembroke, North Carolina

One secretary to another at the Internal Revenue Office: "Here's another good one, Mable. Bachelor, no dependents, thirty-five thousand dollars a year."

Ricky Haynes
Holyoke, Colorado

After Johnny's first day at school, his mother asked him, "Did you learn anything at school today?"

Johnny: "No, I guess not, because I have to go back tomorrow."

Calvin Minnitt, Jr.
Calvert, Texas

First lady: "How are your children doing in school?"

Second Lady: "Better," said the weary mother, "but I still go to PTA meetings under an assumed name."

Harold Fair
Hurtsboro, Alabama

Waiting in line at the practice jumping club, a new member nervously inquired of an old veteran, "What made you decide to become a jumper?"

The man replied, "A plane with three dead engines."

Eugene Dirkman
Calumet, Michigan

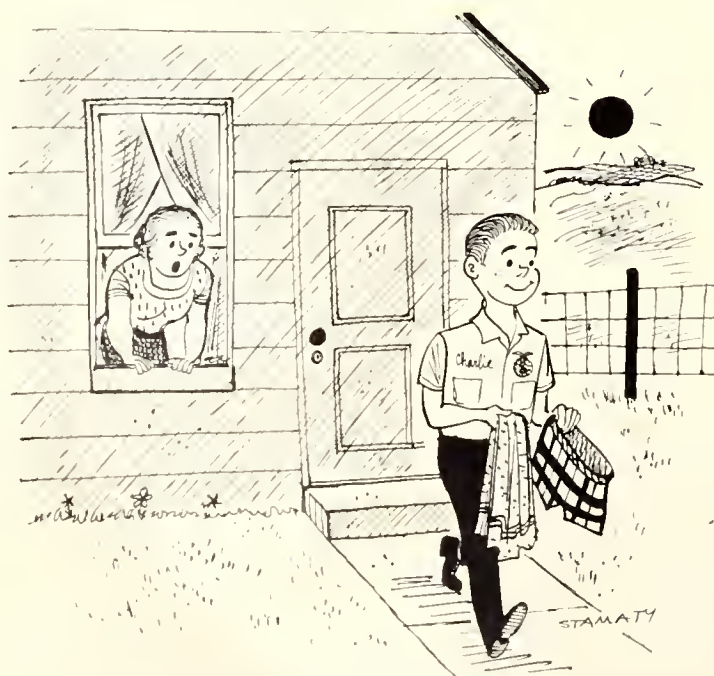
A little man was sitting in a restaurant when a big man came in and beat him up. He told the waitress to tell the little man, "That was karate, from Japan."

The next day the big man beat up the little man again, and left the message, "That was judo, from Japan."

The next day, the little man beat up the big man, and left word with the waitress to tell him, "That was a lug wrench from Western Auto."

Marvin Jackson
Prosper, Texas

Charlie, the Greenhand



"I can't figure out why you need to check the farm pond so often."

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CUT OUT FROM THE HERD!



STANLEY BUSH

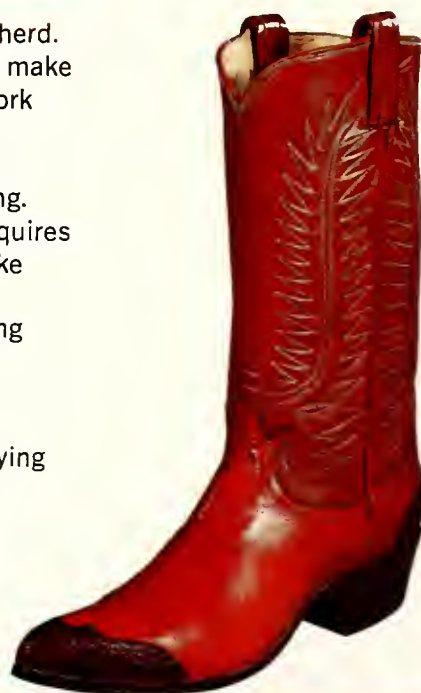


LAURA COTTER

It's no easy task to pick the best out of the herd. It takes years of training and experience to make a quarterhorse a consistent performer in work categories like cutting, roping and racing as well as in the tamer but no less demanding competitions of Western pleasure and reining. Moulding that horse into a winner often requires specialists in each field . . . professionals like Stanley Bush, a top Cutting Horse trainer. Or Laura Cotter, a Halter and Pleasure Riding specialist, who helped train "Bar Money" into an AQHA Supreme Champion . . . one of only six in the world. They count on top performance at boot buying time, too. Both agree Tony Lama boots have what it takes to be a champion. Looks, comfort and wear.



Style 180-T-3
Honey Caribou
with rolled edge
Algonquin styling
and Alhambra
Kid tops.



Style L-210-J-3
Sorrel Kangaroo
vamps with lightweight
soles and genuine
Lizard wing tips
and counter foxing.



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Meet the 'cornpower' combines that are just as great for soybeans.



And because they're New Holland, you can count on these workhorses to stay great for years.

What it means: "Cornpower" is more than a word. It's a promise.

Stroll around one of these combines and you'll see what we mean. That's rugged roller chain you see on major drives (and throughout the cornhead). Notice how the concave can be adjusted both front *and* rear . . . and how it locks firmly into place.

Then check the positive chain-slat drive in the heavy-duty feeder. It's designed to carry ears crosswise to the cylinder—not end first. This means the entire ear comes in contact with the rasp bar at the same time so there's greater shelling action with less crackage.

You can count on more corn reaching the cylinder, too. The cornhead profile is extra-low . . . slips under downed and tangled crops.

Up on the platform, there's more you'll like. The variable-speed reel control is a boon in beans. It's standard equipment on all New Holland combines. So is the variable-speed cylinder. And the rear beater is tied in with the cylinder. Slow the cylinder and the rear beater slows, too. Result: you thresh grain effectively with minimal cracking.

Which one is right for you?

Model 975—87-hp engine . . . cylinder almost 40 inches wide, 20 in

diameter . . . separation area of 5,711 square inches, 80-bushel tank . . . 2-, 3-, 4-row cornheads . . . 11-, 13-, 15-foot grain headers.

Model 985—108-hp engine . . . cylinder nearly 40 inches wide, almost 24 inches in diameter . . . separation area of 6,584 square inches, 90-bushel tank (110 bushels with optional extensions) . . . 2-, 3-, 4-, and 6-row cornheads . . . grain headers up to 19 feet wide.

If your needs are greater, ask your New Holland dealer to show you the mighty Model 995. It has the most total harvest power you can put in your fields.

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